

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

PERSONALIZED MEDIA
COMMUNICATIONS, LLC,

Plaintiff,

v.

APPLE INC.

Defendant.

Case No. 2:15-cv-1366-JRG-RSP

APPLE'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

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I. INTRODUCTION

Pursuant to Federal Rule of Civil Procedure 52 and the Court’s instruction (6/22/2021 Trial Tr. at 262:17-22), Defendant Apple Inc. (“Apple”) submits these proposed Findings of Fact and Conclusions of Law for its defenses of prosecution laches, unclean hands, and obviousness-type double patenting. As set forth below, Plaintiff Personalized Media Communications, LLC (“PMC”) should be barred from asserting U.S. Patent No. 8,191,091 (“the ’091 patent”) against Apple, the ’091 patent should be found unenforceable under the doctrines of prosecution laches and unclean hands, and claims 13-16 of the ’091 patent should be found invalid for obviousness-type double patenting.¹

II. PROPOSED FINDINGS OF FACT²

A. BIOGRAPHICAL INFORMATION FOR THE ’091 PATENT

1. The ’091 patent, titled “Signal Processing Apparatus and Methods,” was issued by the United States Patent and Trademark Office on May 29, 2012. Dkt. 623 at 8, Stipulated Fact No. 34; DTX-3 at Cover.

2. The application that issued as the ’091 patent was filed on June 7, 1995, and assigned U.S. patent application No. 08/485,507 (“the ’507 application”). Dkt. 623 at 9, Stipulated Fact No. 35; DTX-3 at Cover.

¹ For purposes of these proposed findings of fact and conclusions of law, Apple assumes that it infringed claims 13-16 of the ’091 patent. Apple’s recital of evidence consistent with the verdict in these proposed findings of fact and conclusions of law is without prejudice to its right to challenge the verdict for insufficiency of the evidence as a matter of law.

² Should this Court determine that any of Apple’s proposed findings of fact is more appropriately considered a legal issue, Apple incorporates such issues by reference into its proposed conclusions of law.

3. The application that issued as the '091 patent was a continuation of the application that led to U.S. Patent No. 7,856,650 (the "'650 patent"), which was a continuation of the application that led to U.S. Patent No. 5,335,277 (the "'277 patent"), which was a continuation of the application that led to U.S. Patent No. 5,233,654 (the "'654 patent"), which was a continuation of the application that led to U.S. Patent No. 5,109,414 (the "'414 patent"), which was a continuation of the application that led to U.S. Patent No. 4,965,825 (the "'825 patent"), which was a continuation-in-part of the application that led to U.S. Patent No. 4,704,725 (the "'725 patent"), which was a continuation of the application that led to U.S. Patent No. 4,694,490 (the "'490 patent"), filed on November 3, 1981. Dkt. 623 at 9, Stipulated Fact No. 36; DTX-3 at Cover.

B. PMC ENFORCES A 2012 PATENT PREDICATED ON 1980S DISCLOSURES AGAINST A 2003 PRODUCT THROUGH A CALCULATED PROSECUTION POLICY OF INTENTIONAL DELAY.

4. PMC filed this suit against Apple in 2015, alleging that Apple infringed PMC's '091 patent. Dkt. 1 ¶1. The accused product is FairPlay, a digital rights management technology that Apple developed in the early 2000's. Dkt. 1 ¶2. Apple launched its first iteration of FairPlay in 2003. 3/17/2021 Trial Tr. (Tribble) at 684:21-23; 3/17/2021 Trial Tr. (Pantos) at 719:13-15; Dkt. 623 at 15-16, Stipulated Fact Nos. 75-76.

5. The '091 patent issued in 2012 and recites claims that were actively prosecuted after PMC met with Apple to discuss PMC's infringement allegations. *See infra* §§ II.D.3 and II.D.4. However, the first time PMC informed Apple of the '091 patent or its specific claims was in 2015, when it filed this suit. Dkt. 623 at 20, Stipulated Fact No. 97.

6. During prosecution of the '091 patent, PMC took the position that the '091 patent was entitled to a September 11, 1987 priority date based on U.S. patent application No. 07/096,096 (the "1987 application"). DTX-1494 at 858; 6/22/2021 Trial Tr. at 57:5-12 (confirming 1987 priority date position "maintained throughout the prosecution"). In a verified interrogatory

response during this litigation, however, PMC took the position that the '091 patent is entitled to a November 3, 1981 priority date based on U.S. patent application No. 06/317,510 (the "1981 application"), of which the 1987 application was a continuation-in-part. 6/22/2021 Trial Tr. at 26:14-16. Although PMC reverted to its 1987 priority position at the jury trial in this case (after it had prevailed in overcoming the IPR challenge and had the benefit of the resulting estoppel), PMC "reserve[d] its rights to argue that the '091 is entitled to the 1981 priority date on appeal." Dkt. 451 at 14 n.1.

7. PMC filed the '507 application that issued as the '091 patent in 1995, among 327 other applications that PMC filed to avoid changes in patent law that went into effect after June 7, 1995. *See infra* ¶¶26-27. The change in law was made in response to an international treaty called the General Agreement on Tariffs and Trade ("GATT"). 35 U.S.C. § 154(a)(2). Among other things, the change effectively curtailed the strategic benefit of serial prosecution of continuation applications to deliberately delay prosecution of claims and to prolong a patent monopoly through "submarine" patents: pursuant to the change ("Post-GATT"), a patent's term was dictated by the date of its earliest priority application, not, as before ("Pre-GATT"), the date of a patent's issuance. *Id.*

8. Between 1981 and 1993, PMC filed only, and sequentially, seven patent applications claiming priority to the 1981 and 1987 applications. DTX-3 at Cover; 6/22/2021 Trial Tr. at 24:6-14. PMC filed this limited number of patent applications over this time frame despite a long-held belief that its 1981 and 1987 applications provided a basis for claiming "many more" inventions. DTX-89 at 1.

9. As further detailed below, PMC's limited application filings between 1981 and 1994 were pursuant to an intentional plan to exploit Pre-GATT prosecution rules to prolong

effective patent coverage through a practice of prosecution delay. In the words of PMC, by prosecuting its patents serially, PMC would be able to obtain “a portfolio of patent coverage that provides protection for considerably longer than the seventeen year term of the first patent to issue.” DTX-89 at 6.

10. The advent of Post-GATT patent laws frustrated PMC’s plan: any applications filed after June 7, 1995 would be subject to Post-GATT rules. And so, PMC’s intentional practice of delay, which it had been pursuing between 1981 and 1994, forced it to file *en masse* applications trying to claim the “many more” inventions that PMC had long-believed to exist within its 1981 and 1987 applications, yet had purposefully avoided filing to exploit Pre-GATT patent laws.

11. The consequence of the 328 application filings, including the one that matured into the 2012 ’091 patent, was a severe administrative burden on the Patent Office, with consequent delays and difficulty assessing patentability. In the words of the Patent Office, PMC’s filings imposed an “extreme burden on the [o]ffice.” DTX-1494 at 898-99. The consequences were exacerbated by intentional efforts on PMC’s part to exploit the burdens that it had imposed on the Patent Office, with the aim of prolonging its effective patent coverage, including the coverage at issue in this case.

12. Following the jury trial on PMC’s infringement claims in which a jury returned a verdict in PMC’s favor, the Court undertook a bench trial on three issues: (1) whether PMC’s prosecution strategies and conduct render the ’091 patent unenforceable under the doctrine of prosecution laches; (2) whether those strategies and conduct render the patent unenforceable in this case because of unclean hands; and (3) whether the asserted claims of the ’091 patent are invalid for obviousness-type double patenting.

C. PMC’S PLAN WAS ALWAYS TO EXTEND ITS PATENT COVERAGE FOR 30 TO 50 YEARS AND ENSNARE EMERGING TECHNOLOGY.

13. PMC’s plan was to delay prosecuting claims for inventions to maximize the duration of PMC’s patent coverage based on the 1981 and 1987 applications.

14. While PMC filed only seven patent applications from 1981 to 1994, PMC knew that its 1981 and 1987 disclosures contained far more potentially patentable inventions and intentionally delayed the filing of applications and claims covering such inventions with the purpose of effecting extended patent coverage that prompt application filing could not achieve.

15. In a 1990 document, the inventor, founder, and Chairman of PMC, Mr. John Harvey, noted that the Patent Office had issued three U.S. patents claiming priority to the 1981 and 1987 applications, but that “[t]he Company believes that it is likely to receive many more U.S. patents covering inventions disclosed in the 1981 and 1987 Applications.” DTX-89 at 1.

16. Mr. Harvey admitted that PMC’s goal for this portfolio was to extend its patent coverage based on the 1981 and 1987 applications out 30 to 50 years. 6/22/2021 Trial Tr. at 62:4-8. PMC memorialized this goal in a 1991 business plan, noting that PMC’s goal was to “build a strong proprietary position, intended to endure for 30-50 years.” DTX-90 at 22. PMC reiterated the goal in a 1992 business plan, noting that PMC “believes that its intellectual property position will enable it to exercise far-reaching market control for as long as 30 to 50 years.” DTX-1000 at 5.

17. PMC’s aim in delaying the issuance of patents was to keep its claimed inventions secret until industries widely adopted the inventions. In a 1991 business plan, PMC noted that it was “working to gain further patent coverage” based on the 1981 and 1987 applications and that a “core element of [PMC’s] ongoing strategy” included obtaining “[f]uture patents covering new technologies as they emerge.” DTX-90 at 22, 25.

18. This strategy of delaying prosecution in order to obtain patents that surface and attack established technologies or industries is often referred to as a “submarine” patent strategy. PMC’s senior vice president, Mr. Boyd Lemna, admitted that PMC’s patents were indeed “submarine patents”: “Yes. That’s what it was classically called was submarine, yes.” 6/22/2021 Trial Tr. at 63:16-19. Mr. Harvey likewise adopted “submarine” as a descriptor of PMC’s patent portfolio, noting that PMC had “made no attempt to publicize our technology.” DTX-88; 4/28/16 Harvey Dep. Tr. at 231:16-20.

19. A consulting company retained by PMC in the 1990s advised PMC of the financial benefits of the “submarine” strategy. DTX-99. St. Clair Intellectual Property Consultants proposed three ways for PMC to generate revenue from its patent portfolio: “selling the patents outright, pure patent licensing, or commercial development.” DTX-99 at 1. PMC never sold the patents or commercially developed a product, and instead focused on the second option, i.e., pure patent licensing. 6/22/2021 Trial Tr. at 43:18-25.

20. For this pure licensing option, St. Clair advised PMC that “[t]he amount of revenue generated from a patent licensing program is entirely dependent on the amount of infringement,” and thus the “licensing program will be most effective when it is launched after widespread infringement of the subject patents.” DTX-99 at 2. St. Clair further advised that “[o]nce infringement becomes widespread in an industry, the patented technology becomes so deeply embedded in commercial products that design around is not an option to infringers.” DTX-99 at 2. Thus, according to St. Clair, “[t]he better strategy may be to keep the PMMC³ patents hidden while industry infringement is quietly monitored. PMMC could then roll out the patents to the industry at an appropriate time in the future, after the PMMC technology has been widely

³ PMMC is a predecessor entity to PMC. 6/22/2021 Trial Tr. at 43:11-13.

adopted.” DTX-99 at 3. As Mr. Thomas Scott, PMC’s general counsel, acknowledged, “the more infringement, the more money you could potentially get” from licensing your patents. 6/22/2021 Trial Tr. at 44:10-13.

21. PMC explained in an internal PMC document that “[i]n some cases markets had yet not matured,” and thus “the Company had deliberately chosen not to publicize widely its technologies or plans.” DTX-169 at 1. By the time of this document in the early 1990s, PMC had developed a list of companies “identified ... as logical choices to benefit from the Company’s technologies.” DTX-169 at 3. Consistent with its submarine strategy, however, PMC noted that it had not yet contacted most of these companies. Apple was one of the companies PMC identified as a “logical choice” for using PMC’s technology but whom PMC did not contact in the 1990s. DTX-169 at 6. As explained further below, PMC waited until 2008 to approach Apple about its portfolio (6/22/2021 Trial Tr. at 47:4-10; 47:24-48:3), and PMC never raised the ’091 patent with Apple until it finally sued Apple in 2015 (6/22/2021 Trial Tr. at 48:10-16).

D. PMC EXECUTED ITS PLAN.

1. PMC serially prosecutes seven applications from 1981 until 1995.

22. In the first 14 years following PMC’s 1981 application, PMC pursued its goal of extending patent coverage by prosecuting continuation applications serially, i.e., “one-by-one.” 6/22/2021 Trial Tr. at 167:5-8. Between 1981 and 1994, PMC serially filed a sequence of seven patent applications claiming priority to the 1981 and 1987 applications, waiting several years between filings on several occasions. DTX-3 at Cover; 6/22/2021 Trial Tr. at 24:6-14. As Mr. Harvey admitted, PMC filed continuation applications during this period before 1995 “as late as the law allowed.” 6/22/2021 Trial Tr. at 60:14-21. According to Mr. Harvey, the “company strategy [was] to pursue one [patent] and then wait on the others until that one was about to issue,” and so on, pursuing one patent at a time. 11/15/95 Harvey Dep. Tr. at 538:2-17. Mr. Harvey also

conceded that the reason PMC waited as long as possible to file was so that the “17-year [patent term] would start as late as possible.” 11/14/95 Harvey Dep. Tr. at 439:18-21.

23. PMC’s internal documents confirm that PMC deliberately used this serial filing strategy to delay prosecution and extend patent coverage as long as possible. For instance, PMC’s 1991 business plan explains that “U.S. patent practice permits serial prosecution” of continuation applications, and that taking advantage of this procedure “can result in a portfolio of patent coverage that provides protection for considerably longer than the seventeen year term of the first patent to issue.” DTX-89 at 6. “By prosecuting ... serially rather than simultaneously,” PMC touted, “the patent owner achieves a portfolio of patent coverage that provides protection for considerably longer than seventeen years because the various patents issue gradually over time and the seventeen [year] term of each patent begins on its issue date.” DTX-89 at 7. PMC’s Vice President of Corporate Development, Mr. Robert Caird, also explained this strategy in a 1992 letter, noting that it was “part of PMMC’s patenting strategy to track it’s [sic] patents back to the original filing date of November 3, 1981 to maintain longevity.” DTX-18 at 1. Mr. Caird further noted that it “is possible to maintain this ‘daisy chain’ if a new patent filing is made prior to the issuance of a pending patent,” and touted that “PMMC is executing such a strategy and will continue to do so well into the future.” *Id.*

24. As a result, PMC’s “strategy” was to “prosecute coverage on its technologies deliberately over time in such a way that broad coverage is in effect at any given time while the duration of coverage is prolonged as long as possible.” DTX-89 at 6-7. Mr. Harvey admitted that PMC followed this serial filing strategy to delay prosecution as long as possible right up until 1995, when the law changed. 6/22/2021 Trial Tr. at 61:2-62:3.

- 2. In response to GATT, and as a result of its delayed serial filing strategy, PMC inundates the Patent Office with 328 applications, thousands of placeholder claims, and thousands of prior art references.**

25. Despite believing that its 1981 and 1987 applications contained far more inventions than had been claimed, PMC had not developed “any concept” of how many inventions were disclosed in the 1981 and 1987 applications until it received notice of a change in law to be effected by GATT. 6/22/2021 Trial Tr. at 53:15-54:5.

26. “[I]n response to” learning that the law governing patent term was going to change, PMC “conducted a detailed analysis of [the 1981 and 1987 applications].” 6/22/2021 Trial Tr. at 170:16-21; *see also* 6/22/2021 Trial Tr. at 210:9-19. According to PMC, “after the issuance” of its ’277 patent on August 4, 1994, PMC “conducted a detailed study of the disclosures of the ’81 and ’87 applications” and “determin[ed] that both applications disclosed many separate and distinct inventions, which had not been patented.” DTX-274 at 1-2. At the time, PMC had only a single application still pending based on the 1981 and 1987 applications. DTX-3 at 1 (referring to U.S. patent application No. 08/113,329, filed August 30, 1993 (“the ’329 application”).

27. Following this study, PMC filed 328 continuation applications based on the ’329 application—all claiming priority to the 1981 and 1987 applications—during a three-month period between March 2, 1995 and June 7, 1995, just before the GATT deadline. 6/22/2021 Trial Tr. at 24:15-17, 50:13-16; DTX-274 at 1-2. In fact, PMC filed 326 of the applications in the four weeks immediately preceding the change in law. Dkt. 623 at 8, Stipulated Fact No. 30. Nothing forced PMC to file all 328 applications by June 7, 1995 as opposed to some later date, other than the fact that PMC “wanted the benefit of the old rule, [and] did not want the new rule[.]” 7/11/13 Harvey Dep. Tr. at 297:7-9.

28. Despite Mr. Scott’s testimony at trial that the Patent Office forced the filing of these 328 applications, the weight of evidence belies that assertion. 6/22/2021 Trial Tr. at 209:13-15.

The filing is, rather, a function of PMC's pre-GATT serial prosecution strategy in combination with a deliberate decision not to investigate the "many" potential applications that PMC believed its 1981 and 1987 disclosures would support. It was PMC's decision to wait until "August of '94" "when the law was passed" to determine how many inventions PMC believed it had. DTX-274 at 1-2; 6/22/2021 Trial Tr. at 51:7-52:4. And as the Patent Office noted, the "Office did not compel Applicant to file 329 applications"; rather, PMC "chose to file" them. PTX-1180 at 30, 32.

29. Mr. Scott, who was "responsible for obtaining almost all of PMC's patents" (6/22/2021 Trial Tr. at 21:10-12), acknowledged that in his 40-year career in patent law, this was the only time he filed this volume of continuation applications based on a single parent application. 6/22/2021 Trial Tr. at 209:6-12. PMC offered no evidence as to why Mr. Scott and PMC chose 328 as the number of applications to file, as opposed to some smaller number. In fact, Mr. Scott testified that in the run up to the GATT deadline, "Mr. Harvey identified 56 separate categories"—not 328—from the 1981 and 1987 applications that constituted "distinct and separate inventive subject matter." 6/22/2021 Trial Tr. at 170:16-25. Moreover, rather than prosecuting all 328 applications to conclusion (i.e., either to issuance of a patent or a final rejection of the application), PMC ultimately abandoned 227 of these applications. DTX-1568 at 1538.

30. Each of PMC's 328 applications spanned nearly 600 pages. *See, e.g.*, DTX-1560 at 1 (tallying 558 pages in the specification and 22 pages of drawings). At the time of these filings, the Patent Office was working with applications in paper form rather than, as it does now, in electronic form. 6/22/2021 Trial Tr. at 212:22-24. This exacerbated the burden for the Patent Office in dealing with this volume of applications. DTX-1494 at 817.

31. Mr. Scott testified that "most of [these 328 applications] started out as one-claim applications." 6/22/2021 Trial Tr. at 217:9-14. After the 1995 GATT deadline, however, PMC

dramatically expanded the number of claims. For instance, Mr. Scott estimated that, “over time, PMC increased the number of claims to around 6,000 [in] those pending applications.” 6/22/2021 Trial Tr. at 218:6-22. The Patent Office estimated that PMC had as many as 10,000 to 20,000 claims pending at one point in the prosecution of these 328 applications. 6/22/2021 Trial Tr. at 219:8-11; DTX-1494 at 792.

32. The Patent Office also expressly noted that trying to analyze all of the claims in PMC’s co-pending applications “would be an extreme burden on the Office requiring millions of claim comparisons.” DTX-1494 at 898-99. And the number of required comparisons only increased after PMC’s initial filings, as PMC expanded and changed its claims.

33. The evidence shows that PMC intentionally used the volume of applications and claims to burden the Patent Office rather than to pursue legitimate and patentably distinct claims. For instance, Mr. Scott admitted that some of these thousands of claims were merely “placeholder claims being used by PMC to put certain applications on hold while [PMC] focused on other applications.” 6/22/2021 Trial Tr. at 224:13-19. Some of these claims were also identical from one application to another, such that PMC had the exact same claim pending in two different applications at the very same time. *Compare* DTX-1566 at 598-99 (claim 2, filed June 7, 1995), *with* DTX-1560 at 600-01 (claim 2, filed June 7, 1995).

34. In addition to including claims that were word-for-word identical in different applications, PMC also submitted claims that the Patent Office believed were not patentably distinct from one another in different applications. For instance, in the application that issued as the ’091 patent, the ’507 application, the Patent Office repeatedly observed that “the claims of [the] 507 were not patentably distinct from claims in other co-pending applications.” 6/22/2021 Trial Tr. at 219:16-220:25; DTX-1494 at 792 (double patenting rejections based on 1981 and 1987

applications), 806 (double patenting rejections based on co-pending applications), 893 (double patenting rejections based on co-pending applications). Examiners handling other prosecutions in this patent family likewise observed that “claims in the related copending applications ... do not appear independent and distinct from the claims in this application.” DTX-1560 at 716 (08/480,383); PTX-1197 at 711 (08/449,413 (“the ’413 application”) (same); PTX-1199 at 746 (08/470,571) (same); *see also* DTX-1568 at 855 (08/474,145 (“the ’145 application”) (“conflicting claims exist between the 329 related co-pending applications ...”); DTX-1560 at 818 (08/480,383) (same); DTX-1566 at 777 (08/488,620) (same); PTX-1197 at 815 (08/449,413) (same); PTX-1199 at 862 (08/470,571) (same).

35. The Patent Office also noted that PMC’s practice of submitting overlapping claims in different applications in front of different examiners was an improper attempt to “shop among the USPTO examiners for conflicting interpretations of the applicants’ claims.” DTX-1494 at 935-36.

36. PMC also repeatedly delayed prosecution by taking technical positions the Patent Office found to be “absurd,” “repugnant,” and “nonsense,” and caused “an unnecessary drain on already limited PTO resources.” DTX-1568 at 1031.

37. The Patent Office also found the specifications and claims “difficult to understand,” DTX-1568 at 1049, which led the Office to request PMC identify specification support for the claims, “requests which have been made by the Office throughout the present prosecution in hopes of getting applicant’s clarification as to *precisely what it is* that applicant claims.” DTX-1568 at 1047 (emphasis in original). On many occasions, “applicant has declined” the Office’s requests. *Id.* Other times, PMC’s attempt to identify supporting disclosure in the “557 pages of the instant 1987 specification ... reads like the directions to a treasure hunt. There’s a piece here, there’s a

piece there, it's in there somewhere.” DTX-1568 at 1049. As of 2002, the Patent Office was still “struggl[ing] in its efforts [to identify support] for the 10,000 or so pending amended claims.” DTX-1568 at 1047. Specifically regarding claim 22 in the '145 “A” application, which eventually led to claim 13 in the '091 patent after several amendments (*see infra*, § II.D.3), the examiner described these issues in detail, and further noted that the claims and the specification “are like ships passing in the night in the same ocean, but not necessarily sailing in the same direction.” DTX-1568 at 1049, 1060, 1063 (rejecting claim 22 under § 112 ¶1).

38. In addition to burdening the Patent Office with this volume of applications and claims, PMC also inundated the examiners in these prosecutions with more than three thousand purported prior art references that the Patent Office had to review during prosecution of PMC's 328 applications. DTX-3 at 1-33; 6/22/2021 Trial Tr. at 224:20-225:6. In light of the evidence, the most plausible explanation for PMC's conduct is that it submitted this barrage of references to burden the Patent Office rather than to inform the Patent Office of legitimate prior art that could impact the patentability of PMC's claims.

39. For instance, many of the references post-dated PMC's priority date, and therefore could not have been prior art. DTX-1494 at 900. Further, the subject matter in several of the references was plainly irrelevant, referring to subjects such as a “beehive,” the word “ZING,” and miscellaneous business cards. DTX-1494 at 900. Faced with this mess of prior art, the examiner in the '507 application aptly commented on the “unusually large number of references” PMC cited, and noted the “failure of the applicant to point out why such a large number of references is warranted.” DTX-1494 at 900. Examiners handling other prosecutions in this family likewise observed the same issue of PMC burdening the Patent Office with an “unusually large number of references,” including many references “apparently unrelated to the subject matter of the instant

invention” DTX-1568 at 856 (08/474,145); DTX-1560 at 819 (08/480,383) (same); DTX-1566 at 778 (08/488,620) (same); PTX-1197 at 816 (08/449,413) (same); PTX-1199 at 863 (08/470,571) (same).

40. Indeed, Mr. Harvey admitted that “clearly” PMC had supplied “many prior art references” to the Patent Office that “had really nothing to do with the inventions claimed in [his] patents” and “were wholly unrelated to any of the subject matter in [his] patents.” 4/29/16 Harvey Dep. Tr. at 462:5-10, 462:13-14, 464:2-8.

41. Mr. Scott testified that “when it was brought to our attention that there were mistakes in [PMC’s information disclosure statements], we submitted a corrected IDS.” 6/22/2021 Trial Tr. at 199:7-18. There is no IDS identified as corrected in the ’507 prosecution, nor any explanation in that file history as to why PMC submitted this unusually large number of references. To the contrary, after the examiner in the ’507 prosecution pointed out the problems with the IDS (DTX-1494 at 900), PMC responded by submitting yet another IDS identifying additional prior art references PMC wanted the examiner “to indicate in the official file wrapper of this patent application that the documents have been considered.” DTX-1494 at 923-24.

3. PMC’s prosecution strategy delayed prosecution of the ’091 patent.

42. Turning to the specific application that issued as the ’091 patent, PMC filed the ’507 application on June 7, 1995, the day before the GATT deadline. While the application included a 558-page specification and 22 sheets of drawings, it included only a single claim. DTX-1494 at 1, 597.

43. The only prosecution events during the first year of prosecuting the ’507 application involved PMC filing information disclosure statements and canceling and amending claims. In particular, between September 5, 1995 and April 4, 1996, PMC filed a series of five information disclosure statements that, collectively, listed 144 pages of references that PMC asked “be

expressly considered during the prosecution of this application.” DTX-1494 at 615; *see also* DTX-1494 at 614-34 (June 5, 1995 IDS listing 19 pages of references); *id.* at 635-99 (December 5, 1995 IDS listing 63 pages of references); *id.* at 700-21 (December 15, 1995 IDS listing 19 pages of references); *id.* at 722-32 (February 5, 1996 IDS listing nine pages of references); *id.* at 742-77 (April 4, 1996 IDS listing 34 pages of references). In addition to those thousands of references, PMC also directed the examiner to PMC’s 328 co-pending applications, which the Patent Office would also need to analyze for double-patenting issues. DTX-1494 at 733-41. As for the claims during the first year of prosecution, PMC canceled the original claim and added a single new claim (application claim 2) on the same day it filed the ’507 application. DTX-1494 at 604-05. Nearly a year later, on June 5, 1996, PMC canceled application claim 2 and expanded the claim set with seven new claims (application claims 3 through 9). DTX-1494 at 779-83.

44. Faced with a 600-page specification, 328 co-pending applications, thousands of prior art references, and two successive claim cancellations and amendments, the examiner issued the first office action in December 1996, rejecting the seven pending claims on several grounds. DTX-1494 at 784-822.

45. In the office action, the examiner described some of the unusual burdens PMC had created. For instance, the examiner questioned the legitimacy of PMC filing so many different applications, noting that “there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending applications.” DTX-1494 at 806. The examiner also noted that “the size of the applicants’ disclosure ... is contributing to the problem” of analyzing the application. DTX-1494 at 809. And because the Patent Office was working from paper-based files at the time, the examiner also noted

that the applications were physically “very difficult to move from cite to cite [sic] because of their size.” DTX-1494 at 817.

46. In addition to the sheer volume of applications and paper, the examiner also correctly foresaw problems with analyzing the number of claims in the co-pending applications. The examiner noted that “it is estimated that there may be between 10,000 and 20,000 claims” in the co-pending applications, and that “[i]t has been noted by the PTO that many of the pending applications have similar claimed subject matter.” DTX-1494 at 792. In light of this, the examiner “reminded” PMC of its “duty to maintain a line of patentable demarcation between related applications,” and the examiner admonished PMC that it should “insure that substantially duplicate claims do not appear in different cases.” DTX-1494 at 792.

47. Following the December 1996 office action, PMC: (1) submitted yet another information disclosure statement listing 18 pages of references (DTX-1494 at 828-46); (2) requested a three-month extension on its response to the office action (DTX-1494 at 847, 885); and (3) responded to the application by amending the seven pending claims (application claims 3 through 9) and further expanding the claim set by adding 23 additional claims (application claims 10 through 32) (DTX-1494 at 847-56).

48. On July 7, 1998, the examiner issued his second office action, this time rejecting all 30 pending claims. DTX-1494 at 890-912. In the office action, the examiner expounded on the continuing burden PMC was causing with its prosecution strategy. For instance, the examiner found and identified “clear evidence that ... conflicting claims exist between the 329 related co-pending applications,” but noted that “analysis of all claims in the 329 related co-pending applications would be an extreme burden on the Office requiring millions of claim comparisons.” DTX-1494 at 898-99.

49. The examiner also noted the “unusually large number of references cited in the instant application (approximately 2,200 originally and 645 in the subsequent IDS).” DTX-1494 at 900. The burden of analyzing all these references was exacerbated by “the failure of applicant to point out why such a large number of references is warranted.” DTX-1494 at 900. The examiner also noted that among these thousands of references were: (1) foreign language references “where there is no statement of relevance or no translation” as required by Patent Office rules; (2) “[n]umerous references [that are] subsequent to applicant’s latest effective filing date of 9/11/87,” and for which the relevancy was “unclear;” and (3) “numerous references that are apparently unrelated to the subject matter of the instant invention such as US Patent #33,189 directed toward a beehive, GB 1565319 directed toward a chemical compound, a cover sheet with only the word ‘ZING’, a computer printout from a library search with the words ‘LST’ on it and a page of business cards including that of co-inventor James Cuddihy.” DTX-1494 at 900.

50. Following this office action, PMC: (1) submitted yet another information disclosure statement (DTX-1494 at 921-24); (2) serially requested two more extensions of time (DTX-1494 at 913, 916, 917, 920); and (3) cancelled 29 of the 30 pending claims and amended the one remaining claim (DTX-1494 at 926-28).

51. Thus, five years into prosecution of the ’507 application, PMC had responded to each office action by inundating the Patent Office with ever more references to review, asking for extensions of time, canceling rejected claims after the examiner’s review, and adding new claims in response to each office action.

52. Between March 2001 and June 2002, PMC and the examiner discussed whether the Patent Office alone should bear the burden of reviewing PMC’s thousands of claims, or whether,

as the examiner proposed, PMC should be required to “eliminate conflicting claims or else certify that there are no conflicting claims.” DTX-1494 at 932-37.

53. In particular, in order to resolve the conflicts between PMC’s various applications, the Patent Office imposed a so-called “Administrative Requirement,” which instructed PMC to either: “(1) file terminal disclaimers in each of the related 329 applications terminally disclaiming each of the other 329 applications, or; (2) provide an affidavit attesting to the fact that all claims in the 329 applications have been reviewed by applicant and that no conflicting claims exists between the applications. Applicant should provide all relevant factual information including the specific steps taken to insure that no conflicting claims exist between the applications, or; (3) resolve all conflicts between claims in the above identified 329 applications by identifying how all the claims in the instant application are distinct and separate inventions from all the claims in the above identified 329 applications.” Dkt. 623 at 10, Stipulated Fact No. 45; *see also* DTX-1494 at 899, 933-36, 974; 6/22/2021 Trial Tr. at 74:11-22.

54. In a March 21, 2001 office action, the Patent Office notified PMC that it had “failed to comply with the Administrative Requirement.” DTX-1494 at 933; Dkt. 623 at 11, Stipulated Fact No. 49.

55. The Patent Office further stated that, although “[t]he applicants object strenuously to the Office’s requirement that they review their hundred [sic] of applications, containing over ten thousand claims, and eliminate conflicting claims or else certify that there are no conflicting claims[.]” “[t]he Office merely asked for something the applicants have been and are required to do anyway, before being entitled to USPTO examination of their applications.” DTX-1494 at 933-934.

56. Mr. Scott suggested at trial that the Patent Office “withdr[ew]” this office action. 6/22/2021 Trial Tr. at 228:21-229:14. As purported support for that suggestion, Mr. Scott pointed to a letter from the Patent Office withdrawing a notice of abandonment in a different prosecution (the ’413 application). 6/22/2021 Trial Tr. at 229:15-230:7 (discussing the file history for the ’413 application, PTX-1197). In the ’507 application, however, there was never a notice of abandonment or any record of any such “withdrawal” of any Patent Office filing. Relatedly, Mr. Scott also implied that the Patent Office terminated the examiner who issued the notice of abandonment in the ’413 application because of his statements to PMC in the notice of abandonment. When asked directly to clarify that implication, Mr. Scott admitted that he knew the termination “was not specifically related to this application.” 6/22/2021 Trial Tr. at 202:4-13.

57. Ultimately, following the March 21, 2001 office action, PMC and the Patent Office agreed to prosecute certain applications ahead of others, and PMC requested that “the instant application [i.e., the ’507 application] should be held in abeyance” while PMC prosecuted other co-pending applications. DTX-1494 at 966.

58. On June 18, 2002, the Patent Office granted PMC’s request and suspended prosecution “FOR A PERIOD OF SIX MONTHS.” DTX-1494 at 973-75. In doing so, the examiner instructed that, “[u]pon expiration of the period of suspension, [PMC] should make an inquiry as to the status of the application.” DTX-1494 at 975. There is no record in the ’507 prosecution of PMC doing so. Instead, the next entries in the prosecution file are three further six-month suspensions of prosecution, dated January 6, 2005 (DTX-1494 at 976-77); October 1, 2007 (DTX-1494 at 984-86); and July 24, 2008 (DTX-1494 at 988-89). In each of those notices, the examiner instructed that PMC should “inquire as to the status of the application” at the end of the six-month period of suspension. There is no record in the ’507 file history of PMC making such

an inquiry, no objection from PMC to the suspensions, and no indication in the '507 file history that PMC did anything to advance prosecution of the '507 application between 2002 and 2011.

59. On April 11, 2011, PMC filed its first substantive paper in the '507 prosecution since August 21, 2001. In it, PMC cancelled the only still-pending claim (application claim 3) and added 31 new claims (application claims 33 to 63). DTX-1494 at 994-1000. This amendment in 2011 was the first time any claim appeared in the '507 application reciting any form of the words “encryption” or “decryption.” 6/22/2021 Trial Tr. at 71:7-72:15.

60. These claims corresponded to claims that had previously been pending in another application. New application claim 45 in the '507 application, for instance, corresponded to a claim that had previously been pending as application claim 22 in the '145 application. DTX-1568 at 929-30. During prosecution of the '145 application, PMC filed an amendment on January 21, 2003, in response to an office action. DTX-1568 at 1128-32. PMC amended pending application claim 22 to add language directed to encryption, decryption, and a decryption key, as shown below (DTX-1568 at 1132).

22. (Twice Amended) A method of [enabling a] ~~decrypting~~ programming [presentation] at a receiver station, said method comprising the steps of:

receiving an information transmission [from at least one of a local source and a remote source, said information transmission] including [disabled] ~~encrypted~~ information;

detecting the presence of an instruct-to-enable signal[, said instruct-to-enable signal designating enabling information];

passing said instruct-to-enable signal to a processor;

[modifying] ~~determining~~ a fashion in which said receiver station locates [said enabling information in response to] ~~a first decryption key by processing~~ said instruct-to-enable signal;

locating said [enabling information] ~~first decryption key~~ based on said step of [modifying a fashion] ~~determining~~;

[enabling] ~~decrypting~~ said [disabled] ~~encrypted~~ information [based on said step of locating said enabling information] ~~using said first decryption key~~; and

outputting said programming [presentation] based on said step of [enabling said disabled information] ~~decrypting~~.

61. This 2003 amendment was the first time any claim subsequently associated with the '507 application was expressly directed to encryption and decryption. DTX-1494 at 849-56, 926-27. PMC introduced this subject matter over 7 years after filing the '507 application, over 15 years after the 1987 application, and over 21 years after the original 1981 application.

62. In April 2011, when PMC added application claims 33 through 63 to the '507 application, it added this 2003 version of application claim 22 from the '145 application as application 45 in the '507 application. PMC did not notify the '507 examiner that the examiner in the '145 prosecution had previously rejected this very same version of the claim as unpatentable. DTX-1494 at 994-1000; DTX-1568 at 1128-32 (see claim 22), 1256 (rejecting claim 22), 1261(same), 1272 (same), 1224 (same), 1296 (amending claim 22). Instead of alerting the '507 examiner to the fact that this application claim had been rejected and then extensively amended to overcome that rejection, PMC represented that this recycled application claim was submitted with

“additional amendments that Applicant believe place the claims in condition for allowance.” DTX-1494 at 993. In fact, application claim 45 as submitted in 2011 had no amendments compared to the claim rejected by the Patent Office in the ‘145 application in 2003.

63. After several additional amendments in the ‘507 application, the Patent Office allowed application claim 45 and issued it as claim 13 in the ‘091 patent on May 29, 2012. DTX-1494 at 1412; DTX-3 at Cover.

4. PMC’s prosecution delay ensnared Apple, FairPlay, and the public.

64. While PMC was delaying prosecution and expanding its patent coverage, Apple was developing FairPlay and launching it to consumers on many platforms.

65. As early as 1991, PMC had identified Apple and several other companies as “logical choices” for using PMC’s technology. DTX-169 at 3. But rather than contacting those companies, PMC “deliberately chose[] not to publicize widely its technologies or plans” since the “markets had yet not matured.” DTX-169 at 1.

66. Instead, PMC waited nearly two decades, until 2008, to contact Apple. 6/22/2021 Trial Tr. at 47:4-48:3; 3/15/2021 Trial Tr. (Holtzman) at 254:21-255:4; DTX-108; Dkt. 623 at 16, Stipulated Fact No. 80. Several years later, PMC for the first time disclosed to Apple why it believed Apple was infringing certain PMC patents. In particular, PMC prepared five claim charts mapping PMC patents to Apple products and services and sent those to Apple on July 19, 2011. 3/15/2021 Trial Tr. (Holtzman) at 270:16-271:17; DTX-119. None of the five patents were the ‘091 patent, and PMC did not identify any claims pending at the patent office. DTX-119 at 1-2. In addition, none of the five patents were included in the lawsuit PMC filed against Apple. DTX-119 at 1-2; 3/15/2021 Trial Tr. (Holtzman) at 273:14-18.

67. Apple responded to PMC’s five claim charts in November 2011, explaining why Apple believed it does not infringe those patents and that those patents were invalid. 3/15/2021

Trial Tr. (Holtzman) at 272:6-12, 274:21-275:2; DTX-125. PMC never substantively responded to Apple's non-infringement positions. 3/15/2021 Trial Tr. (Holtzman) at 275:3-8. And other than the patents PMC identified to Apple in July 2011, prior to this lawsuit PMC never identified any other patents that it believed Apple might be infringing. 3/15/2021 Trial Tr. (Holtzman) at 275:3-8.

68. After Apple's presentation explaining why Apple did not believe it was infringing the five patents PMC identified, PMC subsequently amended the still-pending '507 application on December 21, 2011. DTX-1494 at 1187-1205. That amendment included amendments to application claim 45, which subsequently issued as asserted independent claim 13 in the '091 patent. DTX-1494 at 1191.

69. PMC filed this lawsuit asserting independent claim 13 from the '091 patent against Apple's FairPlay on July 30, 2015. Dkt. 1 at 8-11. PMC did not send or specifically identify the '091 patent to Apple before filing this lawsuit in July 2015. Dkt. 623 at 20, Stipulated Fact No. 97.

70. PMC suggested that it did not hide or "submarine" its patents, because the substance of its 1981 and 1989 specifications was published in the late 1980s. However, publishing those specifications was not tantamount to publishing the claims PMC was seeking in its prosecutions. Indeed, Mr. Scott agreed that "the claims of a patent don't become firm until they are finally allowed by the Patent Office; and so no one can know, PMC or anybody else, what will ultimately issue out of a patent application until it, in fact, does issue from the [P]atent [O]ffice." 6/22/2021 Trial Tr. at 46:1-6. PMC did, however, know all along that it intended to prosecute claims on many more inventions, and it was intentionally drawing out the prosecution of those claims. *See supra* §§ II.C, II.D.1, and II.D.2.

71. The evidence establishes that Apple had never heard of PMC, PMC's patent portfolio, or the '091 patent before PMC's contact in 2008, and experts in the industry had likewise never heard of PMC or its patents until PMC filed this lawsuit. For instance, PMC's own technical expert testified that although he "would have been on top of and aware of all of the significant developments in key management over the last 44 years, the first time [he] heard of PMC or its patents was when [he was] called to be an expert in this case." 3/16/2021 Trial Tr. (Weaver) at 537:8-538:1. Apple's technical expert likewise testified that during his 40-year career in the field of decryption, he had never heard of PMC or the '091 patent before this lawsuit. 3/17/2021 Trial Tr. (Wicker) at 773:19-774:2. Similarly, Dr. Tribble, Apple's Vice President of Software Technology, had never heard of PMC despite being responsible for reviewing existing content-delivery technologies in the early 2000s. 3/17/2021 Trial Tr. (Tribble) at 683:6-14.

72. Meanwhile, from at least 1995 and continuing well into the 2000s, the public invested substantial effort and money into developing internet and web-based content-delivery technologies across several industries. In a letter PMC wrote to its members in 2012, PMC stated that in the 15-year period from 1995 to 2010, "a technological revolution occurred, centered around the Internet and the distribution of web-based content through various devices, including televisions, computers, and mobile smartphones." DTX 126 at 1. As a result, according to PMC, the industry had "exploded in use" of PMC's patented technology. DTX 126 at 1. DRM technology, specifically, was also being developed during that time period, including technologies like PlayReady, Widevine, Open Mobile Alliance, and Intertrust, as well as in-house technology being developed by record labels. 3/16/2021 Trial Tr. (Tribble) at 582:6-14; 3/17/2021 Trial Tr. (Tribble) at 679:7-681:16.

73. Against that backdrop, Apple began developing FairPlay in the early 2000s. 3/17/2021 Trial Tr. (Tribble) at 684:1-4. Apple first launched FairPlay together with the Apple Music store in 2003. 3/17/2021 Trial Tr. (Tribble) at 684:21-23; 3/17/2021 Trial Tr. (Pantos) at 719:13-15; Dkt. 623 at 15-16, Stipulated Fact Nos. 75-76. Apple expanded FairPlay to its App Store in 2007. 3/17/2021 Trial Tr. (Tribble) at 686:11-16.

74. Since launching FairPlay in 2003, Apple has continued developing and improving the product to add new features, address new security threats, and expand coverage to additional products. 3/17/2021 Trial Tr. (Tribble) at 686:11-16, 688:5-14, 690:22-691:11; 3/17/2021 Sealed Trial Tr. (Pantos) at 105:19-106:15; Dkt. 623 at 15-16, Stipulated Fact Nos. 75, 77.

75. The evidence shows that Apple could have adopted non-infringing alternatives to the DRM technology in FairPlay before the '091 patent issued in 2012. Specifically, Dr. Wicker testified that there were alternative implementations that would not use the instruct-to-enable signals that are recited in the asserted claims from the '091 patent. 6/22/2021 Trial Tr. at 105:16-107:15. He further testified that those alternatives were well known in the early 2000s, Apple engineers could have implemented the alternatives and achieved the same level of security in FairPlay, and he was aware of no reason Apple could not or would not have done so if there had been a reason to implement an alternative. 6/22/2021 Trial Tr. at 107:16-108:16.

5. PMC's explanations for the prosecution delays are belied by the evidence.

76. At trial, PMC suggested several excuses for the delay in its prosecution of the '091 patent. None of these excuses are supported by credible evidence.

77. For instance, PMC suggested that the reason it delayed filing its barrage of patent applications until 1995 was that it did not have the money to file those applications earlier. 6/22/2021 Trial Tr. at 162:23-163:4. The evidence belies that suggestion. When asked whether a lack of funds was the reason PMC delayed filing its applications, Mr. Harvey testified that "I don't

think [lack of funds] was controlling.” 6/22/2021 Trial Tr. at 59:17-22. When Mr. Scott was asked whether PMC has “ever filed an application later than it might have filed because of a lack or shortage of funds,” he responded that “the answer to that is no.” 6/22/2021 Trial Tr. at 227:13-20. In fact, Mr. Harvey testified that in 1992 PMC was valued at \$7.8 million. 5/24/11 Harvey Dep. Tr. at 240:13-15.

78. Ultimately, Mr. Harvey confirmed that there were no legitimate business or financial reasons for the delay in filing PMC’s applications, because he admitted that if the law had required PMC to “file patent[] applications as soon as expeditiously possible,” PMC “would have behaved differently” and “would have filed them sooner.” 6/22/2021 Trial Tr. at 59:23-60:5. Simply put, the evidence shows that PMC’s goal to delay prosecution and prolong its patent coverage, as stated in PMC’s internal documents and admitted in PMC’s testimony, was the reason PMC delayed filing its 328 applications until 1995.

79. As for the delays after 1995, PMC relied extensively at trial on a demonstrative exhibit purporting to show three periods of delay that PMC attributes to the Patent Office. Dkt. 636, PDX-TS-3. Specifically, Mr. Scott blamed the Patent Office for delays purportedly caused by: (1) a suspension of prosecution beginning August 22, 1997 in light of a double-patenting rejection (6/22/2021 Trial Tr. at 183:13-20); (2) a six-year stay of prosecution beginning in 2003 in light of reexaminations of several of PMC’s issued patents in the family (6/22/2021 Trial Tr. at 203:24-25); and (3) the fact that the ’507 application was treated as a so-called “B” application that was held in abeyance pending resolution of another application, U.S. patent application 08/474,145 (6/22/2021 Trial Tr. at 191:25-192:1). But as explained above, the complications that led to these events were created by PMC filing 328 applications with overlapping and patentably indistinct claims. Moreover, PMC has not offered any credible evidence as to why the Patent

Office, rather than PMC, is to blame for each of these periods, nor any credible evidence showing that PMC even attempted to advance the '507 invention during each period.

80. Mr. Scott testified that the double-patenting stay beginning in August 1997 “lasted about 13 months,” after which the Patent Office withdrew its double-patenting rejections. 6/22/2021 Trial Tr. at 181:10-22; 183:13-23. But the double-patenting problems were the result of PMC’s prosecution tactics, as the examiners repeatedly noted. *See supra* §§ II.D.2 and II.D.3. Moreover, the '507 application shows that the Patent Office suspended prosecution for only six months in order to “consider the complex issues surrounding the numerous related applications,” and instructed PMC to “make an inquiry as to the status of the application” once that six-month period expired. DTX-1494 at 887. PMC did so on February 19, 1998. DTX-1494 at 888. A few months later, on July 7, 1998, the Patent Office issued another office action rejecting the claims in the '507 application on various grounds, including maintaining a double-patenting rejection. DTX-1494 at 890-912.

81. Mr. Scott suggested that the Patent Office stayed PMC’s prosecutions for six years beginning in 2003 as a result of pending reexaminations of issued patents related to the co-pending applications, and he testified that PMC unsuccessfully attempted to lift the stay. 6/22/2021 Trial Tr. at 202:16-203:25. But PMC, in fact, asked the Patent Office to hold the '507 application in abeyance even before 2003, in favor of prosecuting other co-pending applications. DTX-1494 at 966. In response to that request, on June 18, 2002, the Patent Office issued a six-month suspension so that PMC could prosecute other applications (the so-called “A” applications) ahead of the '091 application. DTX-1494 at 974-75. In doing so, the Patent Office instructed PMC to inquire at the end of the six-month period. DTX-1494 at 975. There is no record of PMC doing so. In fact, from June 18, 2002 until April 10, 2011, the only entries in the file history for the '507 application

are four notices of suspension from the Patent Office and a notice from PMC changing its prosecution counsel. DTX-1494 at 973-89. Each of the notices of suspension put the '507 in abeyance for a period of just six months, and in each notice the Patent Office instructed PMC to inquire about the application at the end of the six-month period. DTX-1494 at 973-75, 976-77, 984-86, and 988-89. There is no record in the '507 file history of PMC doing so, and no evidence in the file history showing that PMC did anything during the period from June 18, 2002 until April 10, 2011 to advance the '507 prosecution.

82. Moreover, the need for breaking PMC's prosecutions into two separate "A" and "B" tracks was necessitated by the extraordinary and unnecessary volume of applications and overlapping claims, which was a problem created by PMC. As the Patent Office noted in another one of the prosecutions in this family, "the fact that applicant chose to file 329 related applications with identical disclosure requires special prosecution review procedures that would not otherwise be required in a 'normal' application." PTX-1180 at 32. The Patent Office went on to explain that "[t]he interrelationship between so many applications with identical disclosure requires special attention particularly when considering potential double patenting issues," which was an enormous time burden for the Patent Office. PTX-1180 at 32. Further, the Patent Office in that prosecution also noted that PMC itself had "contributed to the lengthy prosecution" in other ways, including by reopening prosecution and seeking extensions of time "resulting in significant delay by applicant." PTX-1180 at 4, 30. Moreover, the Patent Office issued a series of suspensions in the "A" application similar to the '507 application, and likewise asked PMC to inquire at the end of each one. As in the '507 application, there is no record of PMC inquiring about the status of the suspensions or asking for prosecution to continue.

83. Finally, the fact remains that PMC intentionally withheld its initial filings from the Patent Office for more than 7 to 13 years, and the resulting traffic jam PMC created in 1995 perpetuated for years. “The Office did not compel Applicant to file 329 applications.” PTX-1180 at 30. It was PMC’s decision to do so, and that choice created an “extraordinary situation,” caused an “extreme burden,” and the Patent Office “continue[d] to struggle in its efforts to [assess] the 10,000 or so pending amended claims” years after the 1995 filings, and even after implementing special procedures in an attempt to ease the burden. PTX-1180 at 5; DTX-1494 at 899; DTX-1568 at 1047.

E. PMC’S EVIDENCE AT TRIAL DID NOT REBUT THE FACTS DEMONSTRATING UNREASONABLE DELAY.

84. On many of the critical facts above, PMC offered no reliable rebuttal evidence. PMC’s internal documents and trial testimony (via deposition designation) from Mr. Harvey, the inventor, founder, and Chairman of PMC, confirmed that PMC’s plan was to delay prosecution as long as possible to extend PMC’s patent coverage for 30 to 50 years and ensnare emerging technology. Mr. Harvey offered no rebuttal to this evidence, because PMC refused to bring him to the bench trial on Apple’s equitable defenses and objected to Apple calling Mr. Harvey. 6/22/2021 Trial Tr. at 258:11-24. Mr. Harvey lives outside the subpoena power of this Court, and PMC refused to accept a trial subpoena on his behalf. Dkt. 623, Ex. A at 2 n.1 (listing Mr. Harvey on Apple’s witness list, but noting that PMC informed Apple that Mr. Harvey “will not accept a trial subpoena or otherwise voluntarily appear live at the bench trial”); 6/22/2021 Trial Tr. at 247:6-18 (counsel for PMC confirming counsel refused to accept service of a subpoena and did not request that Mr. Harvey attend trial), 258:11-24.

85. Instead, Mr. Scott was PMC’s only live witness at trial, and on the critical facts he lacked knowledge, lacked credibility, or both.

86. For instance, regarding PMC's plan to extend the duration and scope of PMC's patent coverage, Mr. Scott repeatedly denied either the existence or knowledge of the plan, until confronted with PMC's internal documents detailing the plan. *Compare* 6/22/2021 Trial Tr. at 37:12-15 ("I'd have to say no" to whether PMC's "strategy was to obtain rights to endure 30 to 50 years") *with* 6/22/2021 Trial Tr. at 62:4-8 (Mr. Harvey admitting that PMC wanted to "extend its intellectual property rights and coverage out 30 to 50 years"); *see also* DTX-1000 at 5 ("believes that its intellectual property position will enable it to exercise far-reaching market control for as long as 30 to 50 years").

87. Mr. Scott also refused to admit that the "328 applications that were filed by June 7th were filed with a single identical claim." 6/22/2021 Trial Tr. at 216:11-14 ("Q. And as an initial matter, those 328 applications that were filed by June 7th were filed with a single identical claim; is that right? A. That is not really correct."). When faced with the prospect of the Court going through all those applications to see whether the applications initially included a single identical claim, Mr. Scott conceded. 6/22/2021 Trial Tr. at 216:15:20 ("Q If we were to go through all those applications, we would find that there was a single identical claim that was cancelled and replaced with a preliminary amendment; is that correct? A. Yes. That is correct").

88. Mr. Scott also refused to admit that the preliminary amendments in most of the 328 applications contained only a single claim. 6/22/2021 Trial Tr. at 216:21-25 ("Q. And so when PMC filed the preliminary amendment -- in fact, for many of those 328 applications, only a single claim was added in the preliminary amendment; right? A. I do not know -- that's not right -- in some of them. Not, I would say, many."). Yet when faced with his prior deposition testimony that "most" started out with one claim, Mr. Scott admitted only that "That's what I said in the Weather Channel case 20 years ago." 6/22/2021 Trial Tr. at 217:1-14. But Mr. Scott never offered any

explanation as to why his sworn testimony in 1995, months after actually filing the applications, would be less accurate than his recollection of the facts today.

89. Mr. Scott also refused to admit that PMC added claims after the original continuation application filings. 6/22/2021 Trial Tr. at 217:18-19 (“Q. And then over time, PMC added claims; right? A Well, that's not -- that’s not really correct.”). Faced with his own prior testimony, however, Mr. Scott conceded that by his own estimate, PMC expanded the number of claims to approximately 6,000 during prosecution of these applications. 6/22/2021 Trial Tr. at 218:6-22 (Q. And by your estimate, over time, PMC increased the number of claims to around 6,000 [in] those pending applications; right? ... A. Yes, that's correct.”).

90. When asked whether PMC had ever “filed identical claims in some of the 328 applications,” Mr. Scott answered that “I don’t recall ever doing that.” 6/22/2021 Trial Tr. at 223:21-23. The prosecution histories confirm that he had in fact filed identical claims in different applications. *Compare* DTX-1566 at 598-99 (claim 2, filed June 7, 1995) *with* DTX-1560 at 600-01 (claim 2, filed June 7, 1995).

91. Mr. Scott testified, and PMC’s counsel reiterated in closing arguments, that the Patent Office “withdr[ew]” its statements decrying the burden created by PMC’s prosecution conduct. 6/22/2021 Trial Tr. at 228:21-229:14, 243:15-21. While the Patent Office withdrew a single office action during prosecution of PMC’s ’413 application (6/22/2021 Trial Tr. at 229:15-230:7 (discussing the file history for the ’413 application, PTX-1197), there is no indication in the ’507 application that the Patent Office withdrew any statements in that prosecution, nor any indication that the Patent Office in any way recanted myriad other statements decrying PMC’s overlapping claims, the volume of applications and claims, and the barrage of prior art submitted by PMC. DTX-1494 at 890-912, 932-37. Mr. Scott had to be reminded of those statements at

trial, after initially testifying that “[y]ou’d have to show me instances of [the Patent Office commenting on the burden of reviewing PMC’s barrage of prior art]. I don’t particularly recall that.” 6/22/2021 Trial Tr. at 225:7-10.

F. PMC ALSO SEEKS TO EXTEND ITS PATENT COVERAGE BY ASSERTING CLAIMS THAT ARE OBVIOUS IN VIEW OF AN EXPIRED PMC PATENT.

92. Apple contends that all of the asserted PMC patent claims are invalid and unenforceable due to obviousness-type double patenting in view of a long-expired PMC patent from the same patent family. Specifically, Apple asserts that, at the time of the alleged invention, claims 13-16 of the ’091 patent, the claims at issue in this case, would have been obvious to a person of ordinary skill in the art in view of claim 22 of the ’277 patent. Dkt. 623 at 3, 20; 6/22/2021 Trial Tr. at 68:13-20.

93. The ’277 and ’091 patents are both continuations of the ’096 application, filed on September 11, 1987, and have the same specification, same inventors, and same owners. Dkt. 623 at 7-9, Stipulated Fact Nos. 24, 36; DTX-420; DTX-3.

94. It is undisputed that claim 13 of the ’091 patent (and its dependent claims) and claim 22 of the ’277 patent are directed to the same inventive purpose: enabling the decryption of transmitted programming. DTX-3, claim 13; DTX-420, claim 22; *see also* 6/22/2021 Trial Tr. at 75:25-76:18. Indeed, as PMC’s expert Dr. Samuel Russ admitted during the bench trial that took place on May 22, “[t]he purpose [of both claims] is to enable decryption of programming, and then [to] output that programming.” 6/22/2021 Trial Tr. at 140:13-15.

95. The differences in language between claim 22 of the ’277 patent and claim 13 of the ’091 patent derive from two principal differences: (1) claim 22 focuses on television programming whereas claim 13 relates to programming more generally, and (2) claim 22 is an

apparatus claim whereas claim 13 is a method claim. Neither of these differences results in any meaningful difference in claim scope.

96. While claims 22 and 13 are directed to different statutory classes of subject matter and use some different phrasing, they describe the same inventive features and functionalities to a person of ordinary skill in the art. As Apple's expert, Mr. Tony Wechselberger, explained, "the purpose of a patent claim is to describe or define an invention through language [and] it's perfectly possible for the language of a claim to describe features and functionalities differently than similar features and functionalities of a different claim ... when, in fact, both end up describing what is, in fact, the same invention." 6/22/2021 Trial Tr. at 76:19-77:5.

97. There is no appreciable difference in claim scope resulting from claim 22 of the '277 patent's focus on television programming compared to claim 13 of the '091 patent's broader reference to programming generally. DTX-3 at claim 13; DTX-420 at claim 22. Television programming is encompassed within the Court's construction of "programming" in the '091 patent to mean "everything that is transmitted electronically to entertain, instruct, or inform, including television, radio, broadcast, print, and computer programming as well as combined medium programming, at least a portion designed for multiple recipients." Dkt. 246 at 35; Dkt. 546 at 1.

98. The different words used in claims 13-16 of the '091 patent (method claim; programming generally) as compared to claim 22 of the '277 patent (apparatus claim; television programming) do not create any meaningful distinction between the claims; they are effectively two sides of the same coin. Normal operation of the claimed apparatus of claim 22 of the '277 patent renders obvious the method of claim 13 of the '091 patent.

99. The effective life of the '091 patent extends nearly 16 years beyond that of the '277 patent—even though claims 13-16 of the '091 patent and claim 22 of the '277 patent have a similar

purpose and features; even though the patents are continuations of the same application filed on September 11, 1987; and even though the patents have the same specification, same inventors, and same owners. Dkt. 623 at 7-9, Stipulated Fact Nos. 24, 36; DTX-420; DTX-3; 6/22/2021 Trial Tr. at 75:25-76:18, 86:20-87:3. While the '277 patent expired on August 2, 2011, almost a year before the '091 patent even issued, the '091 patent will not expire until July 7, 2027. 6/22/2021 Trial Tr. at 25:5-9, 73:3-13, 86:20-87:3. The result is a near doubling of the length of PMC's patent monopoly on obvious variants of the same invention.

100. The '277 patent was asserted by PMC in at least four patent infringement lawsuits from 1995 through 2011. DTX-1494 at 1221-23. If successful in this case, PMC will have been able to extract royalties for over three decades from companies that implement stations that receive encrypted transmissions and then decrypt and output programming.

1. Claim 22 of the '277 patent claims an apparatus for decrypting programming.

101. The '277 patent, entitled "Signal Processing Apparatus and Methods," was issued by the Patent Office on August 2, 1994. Dkt. 623 at 6, Stipulated Fact No. 22; DTX-420 at Cover; 6/22/2021 Trial Tr. at 73:1-2.

102. The application that issued as the '277 patent was filed on May 3, 1993, and assigned application No. 08/056,501. Dkt. 623 at 7, Stipulated Fact No. 23; DTX-420 at Cover; 6/22/2021 Trial Tr. at 72:23-25.

103. The application that issued as the '277 patent was a continuation of the application that led to the '654 patent, which was a continuation of the application that led to the '414 patent, which was a continuation of the application that led to the '825 patent, which was a continuation-in-part of the application that led to the '725 patent, which was a continuation of the application that led to the '490 patent filed on November 3, 1981. Dkt. 623 at 7, Stipulated Fact No. 24; DTX-420 at Cover.

104. Claim 22 of the '277 patent is directed to a “television subscriber station” that decrypts selected transmissions of encrypted television programming. DTX-420, claim 22; *see also* 6/22/2021 Trial Tr. at 75:20-24, 139:6-18.

105. Claim 22 of the '277 patent recites as follows:

22. A television subscriber station comprising:

a receiver for receiving a plurality of television program transmissions;

a tuner for tuning said receiver to a selected one of the plurality of television program transmissions and of informing a processor of the selected transmission to which said receiver is tuned;

a decryptor operatively connected to said receiver for receiving, decrypting, and outputting some of said selected television program transmission; and

a processor operatively connected to said tuner and said decryptor, for receiving information transmitted in a selected program transmission, locating or identifying information of an instruct-to-decrypt signal associated with said selected transmission, and identifying and transferring to said decryptor a signal needed for decryption, said processor being programmed with or preinformed of the technique for identifying information of said signal needed for decryption.

DTX-420 at 316:64-317:15.

106. There are no disputes between the parties regarding the constructions that should be applied to the terms of this claim. 6/22/2021 Trial Tr. at 102:16-103:10; *see also id.* at 88:6-90:16 (Apple’s expert responding to the Court’s questions regarding claim construction), 138:8-16 (PMC’s expert confirming encryption and decryption in both patents are limited to digital information). Both parties agree that the terms “decrypting” and “decryption,” as used in claim 22 of the '277 patent, should have the same meaning that they do in the claims of the '091 patent. *See, e.g.,* 6/22/2021 Trial Tr. at 131:7-18 (confirming PMC’s understanding that decryption is operation performed on digital signals). The parties further agree that all of the remaining terms of claim 22 have their plain and ordinary meaning, and do not require further construction.

107. The parties' positions regarding the terms that require construction are consistent with this Court's holdings in *Personalized Media Commc'n, LLC v. Motorola, Inc.*, where PMC previously asserted claim 22 of the '277 patent. In that case, the Court found that the term "decrypt" required construction, but did not construe any other terms of claim 22. *Personalized Media Commc'n, LLC v. Motorola, Inc.*, No. 2:08-CV-70-CE, 2011 WL 4591898, *32-33 (E.D. Tex. Sept. 30, 2011). Indeed, the Court expressly found that the terms "transmission," "television program transmission," "instruct-to-decrypt signal," "signal needed for decryption," "technique," and "decryptor" did not require construction. *Id.* at *7, *10, *20, *22, *34.

2. Claims 13-16 of the '091 patent claim a method of decrypting programming

108. Claim 13 of the '091 patent is directed to "[a] method of decrypting programming at a receiver station." DTX-3, claim 13; *see also* 6/22/2021 Trial Tr. at 68:8-12, 139:1-5.

109. Claim 13 of the '091 patent recites as follows:

13. A method of decrypting programming at a receiver station, said method comprising the steps of:

receiving an encrypted digital information transmission including encrypted information;

detecting in said encrypted digital information transmission the presence of an instruct-to-enable signal;

passing said instruct-to-enable signal to a processor;

determining a fashion in which said receiver station locates a first decryption key by processing said instruct-to-enable signal;

locating said first decryption key based on said step of determining;

decrypting said encrypted information using said first decryption key; and

outputting said programming based on said step of decrypting.

DTX-3, claim 13.

110. Claim 14 of the '091 patent depends from claim 13 and recites “[t]he method of claim 13, further comprising the step of computing a second decryption key, and wherein said step of decrypting comprises decrypting said encrypted information using said first and second decryption keys.” DTX-3, claim 14.

111. Claim 15 of the '091 patent depends from claim 14 and recites “[t]he method of claim 14, wherein said first and second decryption keys are used to decrypt a video portion of said programming.” DTX-3, claim 15.

112. Claim 16 of the '091 patent depends from claim 13 and recites “[t]he method of claim 13, further comprising the step of storing information evidencing said step of decrypting.” DTX-3, claim 16.

3. There is no meaningful or patentable difference between claim 13 of the '091 patent and claim 22 of the '277 patent.

113. Claim 22 of the '277 patent discloses each limitation of claim 13 of the '091 patent for the reasons set forth below.

a. “receiving an encrypted digital information transmission including encrypted information”

114. Both claim 13 of the '091 patent and claim 22 of the '277 patent describe receiving transmissions of encrypted digital programming. DTX-3, claim 13; DTX-420, claim 22; *see also* 6/22/2021 Trial Tr. at 77:6-78:12, 137:25-138:11. PMC does not dispute that both claim 13 and claim 22 “describe receiving encrypted transmissions.” 6/22/2021 Trial Tr. at 137:25-138:7.

115. Where claim 13 of the '091 patent recites “receiving an encrypted digital information transmission including encrypted information,” claim 22 of the '277 patent recites “a receiver for receiving a plurality of television program transmissions” and “a decryptor operatively connected to said receiver for receiving, decrypting, and outputting some of said selected television

program transmission.” DTX-3, claim 13; DTX-420, claim 22; *see also* 6/22/2021 Trial Tr. at 77:6-78:12, 137:25-138:11.

116. While claim 22 of the ’277 patent does not use the phrases “encrypted information” or “encrypted digital information,” a person of ordinary skill in the art would have understood that, for the received television program transmission to be decrypted, it must first have been encrypted. 6/22/2021 Trial Tr. at 77:17-78:3.

117. A person of ordinary skill in the art would also have understood that the encrypted television program transmission of claim 22 is “all-digital,” as required by the Court’s construction of the term “encrypted digital information transmission,” because—according to the Court’s constructions—encryption and decryption are digital processes. 6/22/2021 Trial Tr. at 78:5-12; *see also id.* at 138:12-16 (“Q And you agree with me that the concepts of encryption and decryption are only applicable to digital information; right? A Yes. And to be clear, that’s also the Court’s construction.”).

118. PMC does not contend that the terms “decrypting” and “decryption,” as used in claim 22 of the ’277 patent, have a different meaning than they do in the claims of the ’091 patent. *See, e.g.,* 6/22/2021 Trial Tr. at 131:7-18 (confirming PMC understanding that decryption is operation performed on digital signals).

- b. “detecting in said encrypted digital information transmission the presence of an instruct-to-enable signal” and “passing said instruct-to-enable signal to a processor”

119. Where claim 13 of the ’091 patent recites “detecting in said encrypted digital information transmission the presence of an instruct-to-enable signal” and “passing said instruct-to-enable signal to a processor,” claim 22 of the ’277 patent recites “a processor operatively connected to said tuner and said decryptor, for receiving information transmitted in a selected program transmission, locating or identifying information of an instruct-to-decrypt signal

associated with said selected transmission.” DTX-3, claim 13; DTX-420, claim 22; *see also* 6/22/2021 Trial Tr. at 78:13-79:1.

120. While claim 13 of the ’091 patent refers to an “instruct-to-enable signal” and claim 22 of the ’277 patent refers to an “instruct-to-decrypt signal,” neither of these terms appears in the shared specification of the ’091 and ’277 patents. *See generally* DTX-3; DTX-420; *see also* 6/22/2021 Trial Tr. at 79:16-21, 143:14-22.

121. Reading the claims, however, a person of ordinary skill in the art would have understood that the “instruct-to-enable signal” of claim 13 and the “instruct-to-decrypt signal” of claim 22 are functionally equivalent. *Compare* DTX-3, claim 13 *with* DTX-420, claim 22; *see also* 6/22/2021 Trial Tr. at 79:2-21.

122. The instruct-to-enable signal of claim 13 of the ’091 patent is information used by a receiver station to enable the decryption of encrypted digital information. 6/22/2021 Trial Tr. at 144:19-145:6.

123. Similarly, the instruct-to-decrypt signal of claim 22 of the ’277 patent enables the decryption of encrypted digital information because, absent the instruct-to-decrypt signal, there would be no decryption. 6/22/2021 Trial Tr. at 145:11-16. Indeed, PMC previously asserted that this term refers to “an instruction or command or control signal that enables decryption.” *Personalized Media Commc’n, LLC v. Motorola, Inc.*, 2011 WL 4591898, at *18.

- c. “determining a fashion in which said receiver station locates a first decryption key by processing said instruct-to-enable signal” and “locating said first decryption key based on said step of determining”

124. Where claim 13 of the ’091 patent recites “determining a fashion in which said receiver station locates a first decryption key by processing said instruct-to-enable signal” and “locating said first decryption key based on said step of determining,” claim 22 of the ’277 patent recites “a processor operatively connected to said tuner and said decryptor, for receiving

information transmitted in a selected program transmission, locating or identifying information of an instruct-to-decrypt signal associated with said selected transmission, and identifying and transferring to said decryptor a signal needed for decryption, said processor being programmed with or preinformed of the technique for identifying information of said signal needed for decryption.” DTX-3, claim 13; DTX-420, claim 22; *see also* 6/22/2021 Trial Tr. at 79:22-80:8.

125. While claim 22 does not explicitly refer to a decryption key, a person of ordinary skill in the art would have understood that a decryption key is a signal needed for decryption. DTX-420, claim 22; 6/22/2021 Trial Tr. at 81:10-16, 82:17-24, 142:23-143:8.

126. Indeed, as construed by the Court, “decrypting” and “decryption” necessarily involve the use of a key. Dkt. 246 at 17; Dkt. 546 at 1; *see also* 6/22/2021 Trial Tr. at 81:10-16, 82:17-24, 142:23-143:8.

127. In addition, it would have been apparent—or, at the very least, obvious—to a person of ordinary skill in the art that the instruct-to-decrypt signal of claim 22 is an input to the claim’s “technique for identifying information of said signal needed for decryption,” such that the subscriber station determines the way to locate a decryption key by processing that instruct-to-decrypt signal. 6/22/2021 Trial Tr. at 79:22-80:8, 81:17-82:3. This was not disputed by PMC’s expert, Dr. Russ, who merely testified that there is no “specific relationship” between the instruct-to-decrypt signal and decryption key “disclosed in the claim.” 6/22/2021 Trial Tr. at 124:3-5.

128. PMC’s evidence at the bench trial as to an alleged different scope of claim 13 was in direct conflict with the position it had taken in this case regarding alleged description of the claim in the 1981 priority application. Though Dr. Russ contended during his direct examination that claim 22 of the ’277 operation for locating a key was “the opposite” of claim 13’s “determining a fashion” step “because it has a preprogrammed or pre-informed technique for accessing that

information” (6/22/2021 Trial Tr. at 147:5-10), he was impeached with his contradictory prior position—when analyzing written description support for claim 13—that claim 13’s scope specifically encompassed “predetermined, preprogrammed techniques to find the key” (6/22/2021 Trial Tr. at 147:11-149:21).

129. PMC’s expert’s position that the scope of claim 13 of the ’091 patent excluded preprogrammed techniques for locating a key is also in conflict with PMC’s infringement theory, which accused Apple’s FairPlay system that has a “single ... predetermined way that the key is found.” 6/22/2021 Trial Tr. at 151:25-152:9; *see also id.* at 153:5-8 (agreeing “Apple’s devices work with a particular pre-chosen way to find the key.”). In fact, PMC’s own attorneys argued to the Court that the “determining a fashion” step of claim 13 can be satisfied even when the process by which a receiver station locates a decryption key occurs only “one way, which is pre-programmed.” Dkt. 582 at 955:16-956:13.

- d. “decrypting said encrypted information using said first decryption key” and “outputting said programming based on said step of decrypting”

130. Both claim 13 of the ’091 patent and claim 22 of the ’277 patent also describe decrypting and outputting encrypted digital programming. DTX-3, claim 13; DTX-420, claim 22; *see also* 6/22/2021 Trial Tr. at 82:4-16, 138:8-11. PMC does not dispute that both claim 13 and claim 22 “describe decrypting and outputting programming,” and that the decryption “is happening with a decryption key.” 6/22/2021 Trial Tr. at 138:8-11, 142:4-143:8.

131. Where claim 13 of the ’091 patent recites “decrypting said encrypted information using said first decryption key; and outputting said programming based on said step of decrypting,” claim 22 of the ’277 patent recites “a decryptor operatively connected to said receiver for receiving, decrypting, and outputting some of said selected television program transmission” and

“transferring to said decryptor a signal needed for decryption.” DTX-3, claim 13; DTX-420, claim 22; *see also* 6/22/2021 Trial Tr. at 82:4-16, 138:8-11.

132. There is no appreciable difference in claim scope due to claim 22 of the ’277 patent’s focus on television programming compared to claim 13 of the ’091 patent’s broader reference to programming generally. DTX-3 at claim 13; DTX-420 at claim 22. Television programming is encompassed within the Court’s construction of “programming” in the ’091 patent to mean “everything that is transmitted electronically to entertain, instruct, or inform, including television, radio, broadcast, print, and computer programming as well as combined medium programming, at least a portion designed for multiple recipients.” Dkt. 246 at 35; Dkt. 546 at 1.

133. Additionally, while claim 22 does not explicitly refer to a decryption key, a person of ordinary skill in the art would have understood that the decryption described by that claim necessarily involves the use of a decryption key. DTX-420, claim 22; 6/22/2021 Trial Tr. at 81:10-16, 82:17-24, 142:23-143:8.

4. Dependent claims 14-16 of the ’091 patent add no meaningful or patentable subject matter beyond what is taught by claim 22 of the ’277 patent.

134. The additional limitations of the asserted dependent claims of the ’091 patent—claims 14, 15, and 16—describe techniques that were commonly used in industry and would have been well-known to a person of ordinary skill in the art. 6/22/2021 Trial Tr. at 83:9-18.

e. Claim 14

135. Claim 14 of the ’091 patent recites “computing a second decryption key” and “decrypting said encrypted information using said first and second decryption keys,” which would have been obvious to a person of ordinary skill in the art. *See* DTX-3, claim 14; 6/22/2021 Trial Tr. at 83:19-84:15.

136. As of the 1987 priority date of the '091 patent, computing and using multiple decryption keys to decrypt information was not novel or inventive. 6/22/2021 Trial Tr. at 83:24-84:15.

137. As explained by Mr. Wechselberger, “there’s prior art all over the place” that discloses computing and using multiple decryption keys to decrypt information, and he walked through two prior art examples that described use of multiple keys in this manner. 6/22/2021 Trial Tr. at 83:24-84:15 (referencing DTX-405 (Mason) and DTX-415 (Seth-Smith)). Mr. Wechselberger also personally attested to his own “experience in the industry back in the beginning in 1980 ... building products for satellite, cable and video broadcast content protection [a]of which used ... [a] plurality of keys.” 6/22/2021 Trial Tr. at 84:10-15.

138. A person of ordinary skill in the art would have found it obvious to use more than one decryption key in the invention of claim 22 of the '277 patent, and would have been motivated to do so because it was well known in the art “that using more than one key or a plurality of keys ... improves security.” 6/22/2021 Trial Tr. at 84:16-22.

139. PMC’s expert Dr. Russ admitted that “a person of skill in the art seeing a decryptor [in claim 22 of the '277 patent]” would have understood that “decrypting is happening with a decryption key.” 6/22/2021 Trial Tr. at 143:5-8. Thus PMC’s contention that claim 14 of the '091 patent is patentably distinct from claim 22 because claim 22 “doesn’t even have a first decryption key” is not accurate. 6/22/2021 Trial Tr. at 129:20-130:1.

140. Moreover, PMC attempts to distinguish Mason because it describes “descrambling” and “broadcast television in the timeframe would have been broadcast in analog format.” *See, e.g.*, 6/22/2021 Trial Tr. at 131:5-18. But PMC’s expert did not dispute Mr. Wechselberger’s opinion that the use of multiple keys was a well-known technique for providing additional security,

regardless of whether the protection involves scrambling analog content or encrypting digital content. 6/22/2021 Trial Tr. at 83:24-84:22; *see also id.* at 130:2-16.

f. Claim 15

141. Using “said first and second decryption keys ... to decrypt a video portion of said programming,” as recited by claim 15 of the ’091 patent, would also have been obvious in view of claim 22 of the ’277 patent. *See* DTX-3, claim 15; 6/22/2021 Trial Tr. at 84:23-85:14.

142. Claim 22 of the ’277 patent describes decrypting television program transmissions, a prime component of which is video. DTX-420, claim 22; 6/22/2021 Trial Tr. at 84:23-85:8.

143. A person of ordinary skill in the art would have been motivated to use multi-key encryption and decryption methods to protect video content for the same reasons that these methods are used for other types of information—because it was well-known that doing so improves security. 6/22/2021 Trial Tr. at 84:16-22, 85:9-14.

144. PMC does not make any arguments specific to claim 15. 6/22/2021 Trial Tr. at 131:25-132:9.

g. Claim 16

145. The additional limitation of claim 16 of the ’091 patent, “storing information evidencing said step of decrypting,” would have been obvious to a person of ordinary skill in the art as well. *See* DTX-3, claim 14; DTX-420, claim 22; 6/22/2021 Trial Tr. at 85:15-86:19.

146. As of the 1987 priority date of the ’091 patent, storing evidence of de-protecting content—regardless of whether that involved decrypting or descrambling the content—was not novel or inventive. 6/22/2021 Trial Tr. at 85:19-86:7.

147. For example, one prior art reference (Block) describes a situation where there is a need to bill a pay television subscriber for viewing a program not included within his or her subscription. DTX-399 at 1:54-64. “Each scrambled program capable of impulse purchase is

transmitted with data including the cost of the program,” and “[a] unique code may also accompany the transmitted cost signal for program identification purposes.” DTX-399 at 3:29-36. “If the cost [of the program] does not exceed the credit and the subscriber otherwise is eligible for impulse purchase, the program can be unscrambled ... [T]he unique program code, if transmitted with the cost information, is stored for subsequent retrieval as an encoded ‘use code’ so that the subscription TV operator can be provided with a record of the impulse purchase programs viewed.” DTX-399 at 3:43-52. Thus the use code, which is information evidencing said step of decrypting, is stored. 6/22/2021 Trial Tr. at 85:19-86:19.

148. Similarly, another prior art reference (Seth-Smith) describes storing a program identification code in the memory of the microprocessor. DTX-415 at 17:54-63, 19:31-34; 6/22/2021 Trial Tr. at 85:19-86:19.

149. A person of ordinary skill in the art would have found it obvious to include such storing functionality in the invention described by Claim 22 of the ’277 patent and would have been motivated to do so to retain records that could be recalled for the billing of *a la carte* programming, such as pay-per-view programming. 6/22/2021 Trial Tr. at 86:8-19.

150. PMC’s argument that “there’s no connection of the descrambling capability [in Block] to the use code” (6/22/2021 Trial Tr. at 133:16-134:12) is belied by Block itself. Block explains that the unique (use) code is transmitted with “[e]ach scrambled program” and is stored “so that the subscription TV operator can be provided with a record of the impulse purchase programs *viewed*,” i.e., descrambled so that the subscriber can view the program. DTX-399 at 3:29-52. Thus the use code is “information evidencing said step of decrypting,” as required by claim 16 of the ’091 patent. DTX-3 at claim 16.

151. Moreover, PMC's attempt to distinguish Block because it describes "descrambling" (6/22/2021 Trial Tr. at 133:8-15) is contradicted by Mr. Wechselberger's testimony that the terms descrambling and decryption "are always context driven" such the words alone are not informative (6/22/2021 Trial Tr. at 100:3-14).

5. Secondary considerations of non-obviousness do not render claims 13-16 of the '091 patent non-obvious in view of claim 22 of the '277 patent.

152. PMC has not presented any evidence of secondary considerations or objective indicia of non-obviousness that pertains specifically to claims 13-16 of the '091 patent.

153. Although PMC's expert, Dr. Russ, testified that he considered "the fact that PMC has taken over 20 licenses with major companies for the breadth of their patent portfolio" and "praise received by [*sic*] people in the patent industry," he did not present any evidence tying these considerations to the '091 patent, let alone to particular claims or claim elements of that patent. 6/22/2021 Trial Tr. at 135:3-10.

154. PMC certainly has not presented any evidence of secondary considerations that pertain specifically to the elements of claims 13-16 that are purportedly novel with respect to claim 22 of the '277 patent.

III. PROPOSED CONCLUSIONS OF LAW

A. THE '091 PATENT IS UNENFORCEABLE UNDER PROSECUTION LACHES

1. Legal Standard

155. Prosecution laches is an equitable doctrine that renders a patent unenforceable when, in light of the totality of the circumstances, a patentee "unreasonabl[y] and inexcusabl[y]" delayed prosecution and the delay resulted in prejudice to an accused infringer or the public. *Cancer Rsch. Tech. Ltd. v. Barr Lab'ys, Inc.*, 625 F.3d 724, 728-30 (Fed. Cir. 2010). Prosecution laches "is to be decided as a matter of equity, subject to the discretion of a district court." *Symbol*

Techs., Inc. v. Lemelson Med., Educ. & Rsch. Found., 422 F.3d 1378, 1385 (Fed. Cir. 2005), *amended on reh'g in part sub nom. Symbol Techs., Inc. v. Lemelson Med., Educ. & Rsch. Found., LP*, 429 F.3d 1051 (Fed. Cir. 2005) (“*Lemelson*”).

156. Analyzing the reasonableness of a delay requires “an examination of the totality of the circumstances, including the prosecution history of all of a series of related patents and overall delay in issuing claims.” *Hyatt v. Hirshfeld*, 998 F.3d 1347, 1364 (Fed. Cir. 2021). The Federal Circuit has cautioned, however, that district courts should not use the “totality of the circumstances” “as a vehicle for blaming the PTO for the prosecution delays,” because ““a delay by the PTO cannot excuse the appellant’s own delay.”” *Id.* at 1364 (quoting *In re Bogese*, 303 F.3d 1362, 1369 (Fed. Cir. 2002)).

157. To establish prejudice, an accused infringer typically must show “evidence of intervening rights, that is, that the accused infringer or others invested in, worked on, or used the claimed technology during the period of delay.” *Id.* at 1362. Additionally, however, an applicant’s “clear abuse of the patent system,” for example when “the applicant’s conduct unduly increases the administrative burden on the PTO and thereby effectively taxes everyone using the system,” can also independently meet the prejudice requirement of prosecution laches. *Id.* at 1369-70.

158. “Prosecution laches acts to protect the public by forcing patentees to file patent claims in a timely manner.” *Symbol Techs., Inc. v. Lemelson Med., Educ. & Rsch. Found., Ltd. P’ship*, 301 F. Supp. 2d 1147, 1157 (D. Nev. 2004). The fact that a patentee complies with the letter of the Patent Statute and PTO regulations is not dispositive for prosecution laches. “It is not the case that an applicant may prosecute his patents however he or she wishes within the statute and PTO regulation, because the doctrine of prosecution laches places an additional, equitable restriction on patent prosecution conduct beyond those imposed by statute or PTO regulation.”

Hyatt, 998 F.3d at 1366. “An applicant must therefore not only comply with the statutory requirements and PTO regulations but must also prosecute its applications in an equitable way that avoids unreasonable, unexplained delay that prejudices others.” *Id.*; *see also id.* at 1369 (“Nor can the contention that some or all of Hyatt’s conduct was not literally violative of law or PTO regulation provide an adequate explanation under these circumstances.”).

2. Burden of Proof

159. A delay in prosecution of more than six years raises a “presumption that [the delay] is unreasonable, inexcusable, and prejudicial,” which thus “shifts the burden to the patentee to prove that either the patentee’s delay was reasonable or excusable under the circumstances or the defendant suffered neither economic nor evidentiary prejudice.”⁴ *Id.* at 1369-70; *see also id.* at 1372 (“[A] delay of more than six years, by any measure, shifts the burden to [the patentee] to prove that [the patentee’s] delay has not caused the PTO or any third party material prejudice.”). Further, when facing the burden of proof created by a delay of longer than six years, “[t]o carry his burden, [the patentee] must show by preponderance of evidence that [the patentee] had a legitimate, affirmative reason for his delay.” *Id.* at 1371-72.

3. Supreme Court Precedent Applying Prosecution Laches

160. Nearly a century ago, the Supreme Court held that “unreasonable delay and neglect on the part of [a patent] applicant” can render a patent unenforceable. *Webster Elec. Co. v. Splitdorf Elec. Co.*, 264 U.S. 463, 465-66 (1924). In *Webster*, the patent claims at issue “were for the first time presented to the Patent Office, by an amendment to a divisional application eight

⁴ In *Hyatt*, the court rejected the Patent Office’s position that intervening rights are not relevant to prosecution laches in the context of Section 145 actions, but held that, pursuant to general laches principles, the over six year delay resulted in a presumption that the patentee carried the burden of overcoming. 998 F.3d at 1369-70.

years and four months after the filing of the original application.” *Id.* at 465. During that period, the applicant “stood by and awaited developments” in the industry before pursuing these claims. *Id.* at 465. The Court held that this eight-year period was “an undue extension of the patent monopoly against private and public rights,” and the Court therefore held that the patent was unenforceable. *Id.* at 466.

161. In another case from the same era, the Supreme Court held that a nine-and-a-half year delay in prosecution rendered a patent unenforceable. *Woodbridge v. United States*, 263 U.S. 50 (1923). The delay in that case was “for the admitted purpose of making the term of the monopoly square with the period when the commercial profit [from the patent] would be highest.” *Id.* at 56. This “designed delay,” the Court held, improperly “postpone[ed] the time when the public could freely enjoy [the invention] for nearly 10 years.” *Id.*

4. Federal Circuit Precedent Applying Prosecution Laches

162. The Federal Circuit recently expounded on the application of the doctrine of prosecution laches. In *Hyatt*, the Federal Circuit held that a district court abused its discretion when it refused to find prosecution laches. *Id.* at 1372.

163. The inventor in *Hyatt*, Gilbert Hyatt, filed 381 continuation applications during the “GATT Bubble,” i.e., in the period leading up to the change in law in June 1995. *Id.* at 1352-53. “Each application was a photocopy of one of 11 earlier parent applications, and each had a small set of claims, many of which were identical to each other.” *Id.* at 1367. “Simply put,” the Federal Circuit noted, “Hyatt’s applications were placeholders.” *Id.*

164. In the years after filing his 381 GATT Bubble applications, “Hyatt filed a series of amendments in his applications that grew the number of claims to a total of approximately 115,000” by 2003. *Id.* at 1353. As a result of these amendments, Hyatt had “presented claims for examination between 12 and 28 years after their alleged priority dates.” *Id.* at 1354; *see also id.*

at 1357 (“Hyatt had delayed years and sometimes multiple decades after his alleged priority dates to submit claims.”).

165. The Federal Circuit held that “the magnitude of Hyatt’s delay in presenting his claims for prosecution suffices to invoke prosecution laches.” *Id.* at 1367. Despite evidence that the delays were even longer, Hyatt argued “he delayed only seven to 11 years to file the four applications at issue and between 10 and 19 years before presenting the claims now in dispute,” but the Federal Circuit found even “these quantities of time are enough to trigger prosecution laches.” *Id.* at 1368. Indeed, the court noted, “the Supreme Court has found patents unenforceable based on eight- and nine-year prosecution delays.” *Id.* at 1367 (citing *Woodbridge*, 263 U.S. 50; *Webster*, 264 U.S. 463).

166. “Beyond merely the magnitude of Hyatt’s delay in filing his claims,” the Federal Circuit found, “Hyatt adopted an approach to prosecution that all but guaranteed indefinite prosecution delay. The PTO presented evidence at trial demonstrating that multiple characteristics of Hyatt’s application and claim web, when combined, made it effectively impossible for the PTO to process them.” *Id.* at 1368.

167. For instance, Hyatt’s patent specifications were “atypically long and complex,” spanning as many as 576 pages of text, which “hindered examiners’ ability to determine compliance with 35 U.S.C. § 112.” *Id.* at 1353-54. Before the Patent Office digitized prosecution files in 2003, the sheer volume of applications and pages meant that “examiners needed to wade through large stacks of paper” when reviewing the various applications. *Id.* at 1368.

168. “Hyatt also engaged in a pattern of filing amendments,” “effectively starting examination from the beginning.” *Id.* at 1368. “Many of these claims were not unique; instead Hyatt repeatedly filed identical or patentably indistinct claims across different applications.” *Id.*

“[T]he number of claims, and their multiplication through amendments since 1995” “posed a significant hurdle to processing the applications,” and the PTO “pointed out a large amount of repetition and redundancy of claims across applications.” *Id.* at 1354-55. Moreover, “Hyatt filed claims that he had previously lost in interference proceedings.” *Id.* at 1369. The Federal Circuit concluded that these tactics “created a perfect storm that overwhelmed the PTO. It was virtually impossible for examiners to perform a double patenting analysis.” *Id.* at 1368.

169. Ultimately, the evidence showed, “the complexity, number, size, and overlap of Hyatt’s applications and claims made it difficult, if not impossible, for examiners to determine the claims’ priority dates for purposes of identifying the relevant body of prior art, to determine whether the claims satisfy the written description requirement, and to identify double patenting issues.” *Id.* at 1357. “Hyatt’s approach to prosecuting his GATT Bubble applications made it impossible for the PTO to process them using its normal compact prosecution procedures.” *Id.* at 1370.

170. “Hyatt’s conduct—including his delay in presenting claims, his creation of an overwhelming, duplicative web of applications and claims, and his failure to cooperate with the PTO—was a clear abuse of the patent system, even if it did not literally violate regulations or statutory provisions.” *Id.* at 1369.

171. In light of these circumstances, the Federal Circuit held that the district court abused its discretion in finding no prosecution laches: “When the above circumstances are considered in their totality, we believe the conclusion is inescapable that the PTO satisfied its burden of proving that Hyatt engaged in unreasonable and unexplainable delay.” *Id.* at 1369. Moreover, the court concluded, the PTO had met its burden of proving material prejudice, because “Hyatt engaged—

intentionally or not—in a clear abuse of the PTO’s patent examination system that contributed to delay in the four applications at issue.” *Id.* at 1370.

172. Another instructive Federal Circuit case is *Lemelson*, where the Federal Circuit upheld a district court’s finding of prosecution laches. *Lemelson*, 422 F.3d at 1386.

173. The patentee in the case, Lemelson, had filed a series of continuation applications beginning in the 1970s claiming priority to a 1950s priority application. *Id.* at 1380. The district court found that an “18– to 39–year time period had elapsed between the filing and issuance of the patents in suit,” and that “[s]ome of the claims asserted by Lemelson in this case will not expire until 2011, fifty-five years after the 1956 application was filed.” *Id.* at 1386; *Lemelson*, 301 F. Supp. 2d at 1156. Lemelson had passed away by the time of the litigation, and thus could not testify. *Lemelson*, 301 F. Supp. 2d. at 1156-57. In light of his absence, the record showed “[d]ecades of delay preceded the assertion of patent claims and Lemelson has offered no adequate explanation for that delay.” *Id.*

174. In light of the decades-long delay and absence of any adequate reason for the delay, the district court noted that “[i]f the defense of prosecution laches does not apply under the totality of the circumstances presented here, the Court can envision very few instances under which it would.” *Id.* at 1156. “To conclude otherwise,” the court continued, “would remove from the public domain subject matter arguably disclosed in Lemelson’s applications, but not timely claimed in a patent, and by any meaningful standard would unreasonably delay the time when the public would be free to use Lemelson’s claimed inventions.” *Id.*

175. The Federal Circuit agreed, concluding that the 18- to 39-year period of time from application to issuance “is not what is contemplated by the patent statute when it provides for continuation and continuation-in-part applications.” *Lemelson*, 422 F.3d at 1386. In reaching that

conclusion, the court explained that the analysis is not confined to reviewing conduct in a single application, because “an examination of the totality of the circumstances, including the prosecution history of all of a series of related patents and overall delay in issuing claims, may trigger laches.” *Id.*

176. As for prejudice, the district court in *Lemelson* found that “the technology Lemelson now tries to cover had already been exploited by Symbol and Cognex and other members of the public ... who had never heard of Lemelson or his patents.” *Lemelson*, 301 F. Supp. 2d at 1154. “The prejudicial effect of Lemelson’s failure to assert his claims without unreasonable delay is that suffered by the public, and privately by Symbol and Cognex and others, which were denied the ability to distinguish that which is claimed by Lemelson from that which is not.” *Id.* at 1156.

177. The Federal Circuit agreed, concluding that “prejudice to the public as a whole has been shown here in the long period of time during which parties, including the plaintiffs, have invested in the technology described in the delayed patents.” *Lemelson*, 422 F.3d at 1386.

178. Notably, in *Lemelson* the district court noted that “Symbol had not demonstrated that Lemelson intentionally stalled in securing the patents.” *Lemelson*, 301 F. Supp. 2d at 1156. The Federal Circuit nevertheless found that “unreasonable delay alone is sufficient to apply prosecution laches without the requirement that Lemelson intended to gain some advantage by the delay.” *Lemelson*, 422 F.3d at 1382.

179. Both *Hyatt* and *Lemelson* involved pre-GATT applications, which was, in part, what enabled the applicants to draw out their patent coverage for decades. In another case, *Cancer Research*, the Federal Circuit noted that these fact patterns “are not likely to be frequently repeated, as patent terms are now measured from effective filing date.” *Cancer Research*, 625 F.3d at 732.

5. Application of the Law to the Facts of this Case

180. The evidence shows that PMC intentionally delayed presenting its claims and delayed issuance of the claims by decades. Just as the patentees in *Webster* and *Woodbridge*, PMC designed the delay and stood by and awaited commercial developments so that it could extend its patent monopoly and postpone the time when the public could freely enjoy the patented invention. *Webster*, 264 U.S. at 456-66; *Woodbridge*, 263 U.S. at 56. While the patentees in those cases extended their monopoly for less than 10 years, PMC extended its monopoly by several decades.

181. In *Lemelson*, the district court found that Lemelson had patents expiring 55 years after his priority applications, which was an unreasonable delay “by any meaningful standard.” *Lemelson*, 301 F. Supp. 2d at 1156. The Federal Circuit agreed, further noting that an 18-year period from application to issuance of one of Lemelson’s patents “is not what is contemplated by the patent statute when it provides for continuation and continuation-in-part applications.” *Lemelson*, 422 F.3d at 1386. In this case, the ’091 patent expires 46 years after the 1981 application and 40 years after the 1987 application. 6/22/2021 Trial Tr. at 25:5-9, 86:20-87:3. And the ’091 patent did not issue until 17 years after PMC filed the ’507 application in 1995. DTX-3.

182. In *Hyatt*, the district court found that the patentee delayed presenting certain claims for examination for between 12 and 28 years after their priority applications. *Hyatt*, 998 F.3d at 1354. Hyatt disputed those numbers, and contended that the delay was between 7 and 19 years. Under either set of numbers, the Federal Circuit found that “[t]he magnitude of Hyatt’s delay in presenting his claims for prosecution suffices to invoke prosecution laches.” *Id.* at 1367. In this case, PMC first filed claims in the ’507 application directed to “encryption,” “decryption,” and “decryption keys” in 2011, 24 years after the 1987 application and 30 years after the 1981 applications. 6/22/2021 Trial Tr. at 71:7-72:15.

183. For the period before 1995, no matter whether the court uses the 1987 application as the priority application or, as PMC contended in this litigation, the 1981 application, the delay before 1995 was well over six years, thus giving rise to a presumption that PMC's delay was unreasonable, unjustified, and prejudicial. *Hyatt*, 998 F.3d at 1369-70. PMC offered no explanation or justification for the delay during this period, nor any evidence to rebut a presumption of prejudice. To the contrary, the evidence from this period emphatically shows that PMC was intentionally delaying prosecution for the very purpose of waiting for industries to adopt emerging technologies that PMC could later sue for infringement. *See supra*, § II.C. In light of the evidence, the delay leading up to 1995 is sufficient to render the '091 patent unenforceable.

184. As for the period after 1995, PMC argues that some of the delay was caused by the Patent Office. In light of the evidence and the case law, and for the reasons below, the court rejects this assertion.

185. As an initial matter, even focusing solely on the period of delay after 1995, the delay from 1995 to 2012 when the '091 patent issued is well more than six years, and PMC thus bears the burden of proving that the delay was reasonable, justified, or not prejudicial. PMC has not met this burden. Indeed, even without shifting the burden, the evidence shows that the delay was unreasonable, unjustified, and prejudicial, as explained below.

186. PMC's prosecution tactics beginning in 1995 largely mirror the patentee's tactics in *Hyatt*. Hyatt filed 381 applications during the "GATT Bubble"; PMC filed 328. *Hyatt*, 998 F.3d at 1367; 6/22/2021 Trial Tr. at 24:15-21. Hyatt's patent specification spanned 576 pages of text; PMC's spanned 558. *Hyatt*, 998 F.3d at 1353; DTX-1494 at 1, 597. Hyatt's applications in 1995 included only a small number of claims; most of PMC's started out with only a single claim. *Hyatt*, 998 F.3d at 1353; 6/22/2021 Trial Tr. at 217:5-17. After 1995, Hyatt filed a series of

amendments that increased the number of claims to 115,000; PMC filed a series of amendments that increased the number of claims to an estimated 6,000 to 20,000. *Hyatt*, 998 F.3d at 1353; 6/22/2021 Trial Tr. at 219:8-11; DTX-1494 at 792. The Patent Office observed that many of Hyatt's claims across the different applications were patentably indistinct, and that this created an impossible task for the Patent Office to analyze double-patenting issues across the applications; the Patent Office repeatedly observed the same in PMC's prosecutions. *Hyatt*, 998 F.3d at 1357, 1368; DTX-1494 at 792, 806, 893. Hyatt filed claims that had previously been rejected by one examiner without notifying the second reviewing examiner; in 2011, during the prosecution of the '507 application, PMC filed the claim that led to the asserted claim 13 in the '091 patent without telling the examiner that it had previously been rejected by the examiner in the '145 application. *Hyatt*, 998 F.3d at 1369; DTX-1494 at 994-1000 (see claim 45, which eventually issued as claim 13); DTX-1568 at 1128-32 (see claim 22), 1256 (rejecting claim 22), 1261(same), 1272 (same), 1224 (same). Instead, PMC represented to the examiner in the '507 application that PMC was submitting the claim (claim 45 in the '507 application) with "additional amendments that Applicant believe place the claims in condition for allowance," DTX-1494 at 993, when in fact, the claim had no amendments compared to the claim rejected by the Patent Office in the '145 application in 2003 (claim 22 in the '145 application). DTX-1494 at 994-1000 (see claim 45); DTX-1568 at 1128-32 (see claim 22), 1256 (rejecting claim 22), 1261(same), 1272 (same), 1224 (same), 1296 (amending claim 22).

187. Just as Hyatt argued that some of the delays in prosecution were attributable to the Patent Office, PMC argues that three periods of delay totaling 8 years and 4 months were attributable to the Patent Office. 6/22/2021 Trial Tr. at 245:6-14. As the Federal Circuit held in *Hyatt*, however, a delay or stay initiated by the Patent Office does not excuse an applicant's delay.

Hyatt, 998 at 1364; *see also* 6/22/2021 Trial Tr. at 244:19-20 (PMC’s counsel’s closing argument: “What I take from *Hyatt*, Your Honor, is don’t blame the patent office.”). The Court finds that the 8 years and 4 months of delay PMC attributes to the Patent Office was not substantially attributable to the Patent Office. Rather, these periods were largely the result of the “perfect storm” created by PMC, just as in *Hyatt*. Moreover, the record shows that PMC made no effort to advance the ’507 application between 2002 and 2011. DTX-1494 at 973-989. While PMC was addressing reexamination of related patents from 2003 to 2009, PMC could have requested the Patent Office move forward with the ’507 application during those years, but chose not to do so. PMC offered no adequate explanation for why it did not do so.

188. Moreover, even accepting PMC’s argument that 8 years and 4 months of the delay was caused by the Patent Office, that still leaves 8 years and 7 months of delay unaccounted for during the 16 years, 11 months between June 7, 1995 (the filing date for the ’091 patent) and May 19, 2012 (when the ’091 patent issued). Thus, PMC still must rebut the presumption that this remaining delay was unreasonable, unjustified, and prejudicial. PMC failed to do so.

189. Thus, however the Court slices the time periods from the 1981 to 2012, there was more than a six-year delay in prosecution of the ’091 patent, and PMC has offered no adequate explanation or justification for the delay.

190. Although not necessary in light of the burden-shifting compelled by the long delays here, there is also ample evidence that Apple and others invested in, worked on, or used the claimed technology between 1995 and up until 2012. Indeed, PMC’s own document admits that between 1995 and 2010, a “technological revolution occurred” and that the industries use of PMC’s patented technology “exploded in use.” DTX-126 at 1. As one example of that, Apple began investing resources in developing FairPlay in the early 2000’s, having never heard of PMC or its

patents. 3/17/2021 Trial Tr. (Tribble) at 683:6-14, 684:1-4. After launching the product in 2003, Apple continued investing in this technology. 3/17/2021 Trial Tr. (Tribble) at 684:21-23; 3/17/2021 Trial Tr. (Pantos) at 719:13-15. The evidence thus shows that PMC's delays prejudiced Apple and the public.

191. Finally, the Court also finds that PMC, just like the applicant in *Hyatt*, unduly increased the administrative burden on the PTO and thereby effectively taxed everyone using the system. As explained above, PMC's prosecution conduct mirrors much of the conduct at issue in *Hyatt*, which the Federal Circuit found sufficiently prejudicial for prosecution laches because of the increased burden on the Patent Office, independent of the prejudice to parties investing in the patented technology.

192. One other case warrants mention: In *Cancer Research*, the Federal Circuit held that the accused infringer "failed to establish either that it or that others developed or invested in [the patented drug] between 1982 and 1991, the period of delay." *Cancer Rsch.*, 625 F.3d at 732. In fact, the accused infringer in that case had not even attempted to enter the market for the patented product until "thirteen years after the issuance of Cancer Research's patent and more than seven years after [Cancer Research launched its own patented drug]." *Id.* at 731. Thus, under the circumstances, there was no evidence of any prejudice to any public or private rights, and in fact "the public has benefitted here by the fact that Cancer Research did develop and market [the patented drug], induced by the protection of its patent." *Id.* at 732. Here, there is both a presumption of prejudice under *Hyatt* due to PMC's delay, as well as direct evidence sufficient to show prejudice to Apple and the public. PMC has failed to rebut this prejudice.

193. The Court finds PMC's conduct in prosecuting the '091 patent and the delay it caused was both unreasonable and unexplained, the delay prejudiced Apple and the public, and the '091 patent is unenforceable under the equitable doctrine of prosecution laches.

B. PMC'S CONDUCT JUSTIFIES A FINDING OF UNCLEAN HANDS.

1. Legal Standards For Unclean Hands

194. The doctrine of unclean hands "closes the doors of a court of equity to one tainted with inequitableness or bad faith relative to the matter in which he seeks relief, however improper may have been the behavior of the defendant. That doctrine is rooted in the historical concept of court of equity as a vehicle for affirmatively enforcing the requirements of conscience and good faith." *Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co.*, 324 U.S. 806, 814 (1945).

195. This doctrine "necessarily gives wide range to the equity court's use of discretion in refusing to aid the unclean litigant. It is 'not bound by formula or restrained by any limitation that tends to trammel the free and just exercise of discretion.'" *Precision Instrument*, 324 U.S. at 815 (quoting *Keystone Driller Co. v. Gen. Excavator Co.*, 290 U.S. 245, 246 (1933)).

196. "[W]here a suit in equity concerns the public interest as well as the private interests of the litigants [the unclean hands] doctrine assumes even wider and more significant proportions. For if an equity court properly uses the maxim to withhold its assistance in such a case it not only prevents a wrongdoer from enjoying the fruits of his transgression but averts an injury to the public. The determination of when the maxim should be applied to bar this type of suit thus becomes of vital significance." *Precision Instrument*, 324 U.S. at 815 (citing *Morton Salt Co. v. G. S. Suppiger Co.*, 314 U.S. 488, 492-94 (1942)).

197. "The possession and assertion of patent rights are issues of great moment to the public A patent by its very nature is affected with a public interest. As recognized by the Constitution, it is a special privilege designed to serve the public purpose of promoting the

‘Progress of Science and useful Arts.’ At the same time, a patent is an exception to the general rule against monopolies and to the right to access to a free and open market. The far-reaching social and economic consequences of a patent, therefore, give the public a paramount interest in seeing that patent monopolies spring from backgrounds free from fraud or other inequitable conduct and that such monopolies are kept within their legitimate scope.” *Precision Instrument*, 324 U.S. at 815-816 (internal citations omitted).

2. PMC Has Unclean Hands With Regard To Its Patent Infringement Lawsuit Against Apple.

198. All of the reasons set forth above in Sections II.C, II.D, and III.A.5 regarding PMC’s delay and deleterious conduct in prosecuting its patents and the Patent Office also support and compel a finding that PMC’s relief should be barred by the doctrine of unclean hands.

199. PMC has also taken positions in this litigation that are inconsistent with positions it took during prosecution at the Patent Office. For example, Mr. Scott testified that PMC steadfastly maintained during prosecution that the priority date for the ’091 patent claims was September 11, 1987. 6/22/2021 Trial Tr. at 55:4-12. Yet in this Court, in this case, PMC contended, and Mr. Scott signed verifications attesting to the truthfulness of interrogatory responses contending, that the ’091 patent claims should be accorded a priority date of November 3, 1981. 6/22/2021 Trial Tr. at 25:10-26:16.

200. PMC, through its agent Mr. Scott, in fact overcame *In re Schneller* double patenting rejections during prosecution by contending that PMC was not claiming a 1981 priority date for the application that led to the ’091 patent. For example, in a June 10, 1997 Amendment and Request for Reconsideration signed by Mr. Scott, PMC argued that “[t]he present application asserts priority based on the 1987 disclosure” (DTX-1494 at 858, 884) and took the position that

the fact it was not claiming priority to the earlier priority overcame the Patent Office's double patenting rejections (DTX-1494 at 868).

201. "[T]he examiner's rejection of the present application under the Schneller double patenting theory based on Harvey U.S. Patents 4,694,490 and 4,704,725 is improper because the present application does not claim the benefit of those applications under 35 U.S.C. § 120. Thus, there could never have been a basis for claiming the present subject matter in those applications." DTX-1494 at 868.

202. Despite contending that "there could never have been a basis for claiming the present subject matter" had priority to the 1981 application (DTX-1494 at 868), Mr. Scott and PMC later did claim priority to the 1981 application during this litigation. 6/22/2021 Trial Tr. at 26:14-16.

203. PMC's specific conduct in dealing with Apple also supports a finding of unclean hands. PMC had Apple in mind as a potential partner or licensor of its patent portfolio by 1991. DTX-169 at 1, 6-7. Yet PMC admits that it only first approached Apple regarding PMC's technology in 2008. 6/22/2021 Trial Tr. at 47:4-48:3; 3/15/2021 Trial Tr. (Holtzman) at 254:21-255:4; DTX-108; Dkt. 623 at 16, Stipulated Fact No. 80. And then even though Apple and PMC had communications from 2008 through 2015, PMC never specifically raised the '091 patent to Apple's attention prior to filing suit in this case. Dkt. 623 at 20, Stipulated Fact No. 97.

204. The nature of PMC's conduct in communicating with Apple, all the while seeking claims at the Patent Office that it would later assert against Apple, also supports a finding of unclean hands. In a meeting on November 14, 2011, Apple presented PMC with confidential details regarding Apple products and why they did not practice claims of five patents PMC had previously identified to Apple. 3/15/2021 Trial Tr. (Holtzman) at 272:6-12, 274:21-275:2; DTX-

125 at 2-12. Unbeknownst to Apple at the time, PMC was prosecuting the claims of the '507 Application, and specifically amended the claims a month later on December 21, 2011 (DTX-1494 at 1188-1205) to the form that ultimately issued and have been asserted in this litigation.

C. PMC'S '091 PATENT IS INVALID FOR OBVIOUSNESS-TYPE DOUBLE PATENTING

205. The '277 patent issued in 1994 and was asserted by PMC in at least four patent infringement lawsuits from 1995 through 2011. DTX-1494 at 1221-23.

206. The '091 patent issued on May 29, 2012 and does not expire until July 7, 2027. 6/22/2021 Trial Tr. at 25:5-9, 86:20-87:3.

207. The Court finds that the asserted claims of the '091 patent improperly extend PMC's patent monopoly to cover no more than obvious variants of PMC's prior patent claim 22 of the '277 patent that expired in 2011, and thus are invalid for obviousness-type double patenting.

1. Legal Standards For Obviousness-Type Double Patenting

208. "Obviousness-type double patenting is a judge-made doctrine that prevents an extension of the patent right beyond the statutory time limit." *In re Berg*, 140 F.3d 1428, 1431 (Fed. Cir. 1998).

209. The purpose of the doctrine of obviousness-type double patenting "is to prevent an unjustified extension of the term of the right to exclude granted by a patent by allowing a second patent claiming an obvious variant of the same invention to issue to the same owner later." *In re Berg*, 140 F.3d at 1431-32; *see also Procter & Gamble Co. v. Teva Pharms. USA, Inc.*, 566 F.3d 989, 999 (Fed. Cir. 2009) ("The double patenting doctrine is designed to prevent a patent owner from extending his exclusive rights to an invention through claims in a later-filed patent that are not patentably distinct from claims in the earlier filed patent.").

210. The Federal Circuit has explained that “[t]he public should ... be able to act on the assumption that upon the expiration of the patent it will be free to use not only the invention claimed in the patent but also modifications or variants which would have been obvious to those of ordinary skill in the art at the time the invention was made, taking into account the skill of the art and prior art other than the invention claimed in the issued patent.” *In re Longi*, 759 F.2d 887, 892-93, 225 U.S.P.Q. 645 (Fed. Cir. 1985).

211. “The primary inquiry in double patenting cases is ... whether the claims in the latter patent are more than a ‘slight variant’ from the claims in the earlier patent.” *Eli Lilly & Co. v. Teva Pharms. USA, Inc.*, 619 F.3d 1329, 1341 (Fed. Cir. 2010) (quoting *Geneva Pharms., Inc. v. GlaxoSmithKline PLC*, 349 F.3d 1373, 1378 (Fed. Cir. 2003)).

212. The Federal Circuit has described a two-part test to determine obviousness-type double patenting: “First, as a matter of law, a court construes the claim in the earlier patent and the claim in the later patent and determines the differences. Second, the court determines whether the differences in subject matter between the two claims renders the claims patentably distinct. A later claim that is not patentably distinct from an earlier claim in a commonly owned patent is invalid for obvious-type double patenting. A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or anticipated by, the earlier claim.” *Eli Lilly and Co. v. Barr Lab’ys, Inc.*, 251 F.3d 955, 968, 58 U.S.P.Q.2d 1869 (Fed. Cir. 2001) (citations omitted); *see also Georgia-Pac. Corp. v. U.S. Gypsum Co.*, 195 F.3d 1322, 1326 (Fed. Cir. 1999), *opinion amended on reh’g*, 204 F.3d 1359 (Fed. Cir. 2000) (“Under obviousness-type double patenting, a patent is invalid when it is merely an obvious variation of an invention disclosed and claimed in an earlier patent by the same inventor. Accordingly, analysis of the claims at issue is the first step in determining if the second invention is merely an obvious variation of the first.”).

213. Unlike statutory obviousness, the judge-made doctrine of obviousness-type double patenting “does not require inquiry into a motivation to modify the prior art” and “does not require inquiry into objective criteria suggesting non-obviousness.” *Procter & Gamble*, 566 F.3d at 999.

2. Relevant Claim Constructions

214. “When construing claim[s] in patents that derive from the same parent application and share common terms, ‘[Courts] must interpret the claims consistently across all asserted patents.’” *Cap. Mach. Co. v. Miller Veneers, Inc.*, 524 F. App’x 644, 647 (Fed. Cir. 2013) (quoting *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1293 (Fed. Cir. 2005)).

215. The ’277 and ’091 patents are related patents with the same specification, and statements made by PMC during the prosecution of the ’091 patent are equally relevant to the construction of the terms used in the claims of the ’277 patent. *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (“Any statement of the patentee in the prosecution of a related application as to the scope of the invention would be relevant to claim construction.”); *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1343 (Fed. Cir. 2015) (“A statement made during prosecution of related patents may be properly considered in construing a term common to those patents, regardless of whether the statement pre- or post-dates the issuance of the particular patent at issue.”).

216. Accordingly the terms “decrypting” and “decryption,” as used in claim 22 of the ’277 patent, have the same meaning that they do in the claims of the ’091 patent: “a method that uses a digital key in conjunction with an associated algorithm to decipher (render intelligible or usable) digital data.” 6/22/2021 Trial Tr. at 101:12-20; Dkt. 246 at 17; Dkt. 546 at 1.

217. All of the other terms used in claim 22 of the ’277 patent have their plain and ordinary meaning to a person of ordinary skill in the art and do not require further construction. 6/22/2021 Trial Tr. at 89:2-23; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005)

(*en banc*) (“the words of a claim ‘are generally given their ordinary and customary meaning’”) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *see also Personalized Media Commc’n*, 2011 WL 4591898, at *7, *10, *20, *22, *34.

218. There is no requirement that this Court construe every term in the claims. *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“The *Markman* decisions do not hold that the trial judge must repeat or restate every claim term”); *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“We, however, recognize that district courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.”). This is particularly true where, as here, the parties do not dispute the construction of any claim term. *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy”); *U.S. Surgical*, 103 F.3d at 1568 (“Claim construction is a matter of resolution of disputed meanings and technical scope ... It is not an obligatory exercise in redundancy.”).

3. The Asserted Claims Are Not Patentably Distinct From Claim 22 Of The ’277 Patent.

219. Whatever differences may exist between claim 22 of the ’277 patent on the one hand, and claims 13-16 of the ’091 patent on the other, they do not rise to the level of patentable distinctions, nor do they justify nearly doubling the length of PMC’s patent monopoly. *See* 6/22/2021 Trial Tr. at 86:23-87:3.

220. Any differences between claim 22 of the ’277 patent and claims 13-16 of the ’091 patent “cannot be considered in isolation—the claims must be considered as a whole.” *Eli Lilly & Co. v. Teva Parenteral Meds., Inc.*, 689 F.3d 1368, 1377 (Fed. Cir. 2012); *see also Gen. Foods*

Corp. v. Studiengesellschaft Kohle mbH, 972 F.2d 1272, 1278 (Fed. Cir. 1992) (“Claims must be read as a whole in analyzing a claim of double patenting.”).

221. When the claims are considered in their totality—as a whole—claim 13 of the ’091 patent is not patentably distinct from claim 22 of the ’277 patent, and is therefore invalid for obviousness-type double patenting.

222. While claim 13 of the ’091 patent and claim 22 of the ’277 patent claim different statutory classes of subject matter, “there is no *per se* nonobvious distinction between a method of using a device and the device itself.” *See Rsch. Corp. Techs., Inc. v. Gensia Lab’ys, Inc.*, 10 F. App’x 856, 863-64 (Fed. Cir. 2001) (holding that though “the same invention is not claimed twice” because of the different statutory classes of subject matter, “there is no nonobvious variation between the claimed composition and the composition to be used in the claimed methods”); *see also In re Lonardo*, 119 F.3d 960, 968 (Fed. Cir. 1997) (“We do not agree that there is a patentable distinction between the method of using the device and the device itself. The claimed structure of the device suggests how it is to be used and that use thus would have been obvious.”).

223. Furthermore, although claim 22 of the ’277 patent describes the decryption of television programming and claim 13 describes the decryption of “programming” more generally, an earlier species claim may render a later genus claim invalid for double patenting. *Eli Lilly & Co. v. Barr Lab’ys, Inc.*, 251 F.3d 955, 971 (Fed. Cir. 2001) (“Our case law firmly establishes that a later genus claim limitation is anticipated by, and therefore not patentably distinct from, an earlier species claim.”) (citing *In re Berg*, 140 F.3d at 1437; *In re Goodman*, 11 F.3d 1046, 1053 (Fed. Cir. 1993); *In re Gosteli*, 872 F.2d 1008, 1010 (Fed. Cir. 1989); *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 782 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 944, (C.C.P.A. 1982)).

224. The asserted dependent claims of the '091 patent—claims 14, 15, and 16—are likewise invalid, as none of them adds any limitation that is sufficient to render it nonobvious in light of claim 22 of the '277 patent.

225. Because all of the elements of claim 14 of the '091 patent are either explicitly recited in claim 22 of the '277 patent or obvious in view of the prior art and/or the knowledge of one of skill in the art, claim 14 is not patentably distinct and is therefore invalid for obviousness-type double patenting.

226. Because all of the elements of claim 15 of the '091 patent are either explicitly recited in claim 22 of the '277 patent or obvious in view of the prior art and/or the knowledge of one of skill in the art, claim 15 is not patentably distinct and is therefore invalid for obviousness-type double patenting.

227. Because all of the elements of claim 16 of the '091 patent are either explicitly recited in claim 22 of the '277 patent or obvious in view of the prior art and/or the knowledge of one of skill in the art, claim 16 is not patentably distinct and is therefore invalid for obviousness-type double patenting.

4. Secondary Considerations Do Not Overcome The Prima Facie Case Of Obviousness.

228. Inquiry into secondary considerations of non-obviousness is not required for an obviousness-type double patenting analysis. *Procter & Gamble*, 566 F.3d at 999 (“[D]ouble patenting does not require inquiry into objective criteria suggesting non-obviousness.”); *Geneva Pharms., Inc. v. GlaxoSmithKline PLC*, 349 F.3d 1373, 1377 n.1 (Fed. Cir. 2003) (“Obviousness requires inquiry into objective criteria suggesting non-obviousness; nonstatutory double patenting does not.”).

229. Regardless, because PMC has failed to identify secondary considerations that relate to any allegedly novel distinctions between claim 13 of the '091 patent and claim 22 of the '277 patent, “there is no nexus to the merits of the claimed invention.” *In re Huai-Hung Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011) (“Where the offered secondary consideration actually results from something other than what is both claimed and novel in the claim, there is no nexus to the merits of the claimed invention.”).

230. Even if the secondary considerations identified by PMC did have a nexus to the merits of the claimed invention, “where a claimed invention represents no more than the predictable use of prior art elements according to established functions, as here, evidence of secondary indicia are frequently deemed inadequate to establish non-obviousness.” *Ohio Willow Wood Co. v. Alps S., LLC*, 735 F.3d 1333, 1344 (Fed. Cir. 2013).

Dated: July 6, 2021

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system per Local Rule CV-5(a)(3) on July 6, 2021.

/s/ Melissa R. Smith